

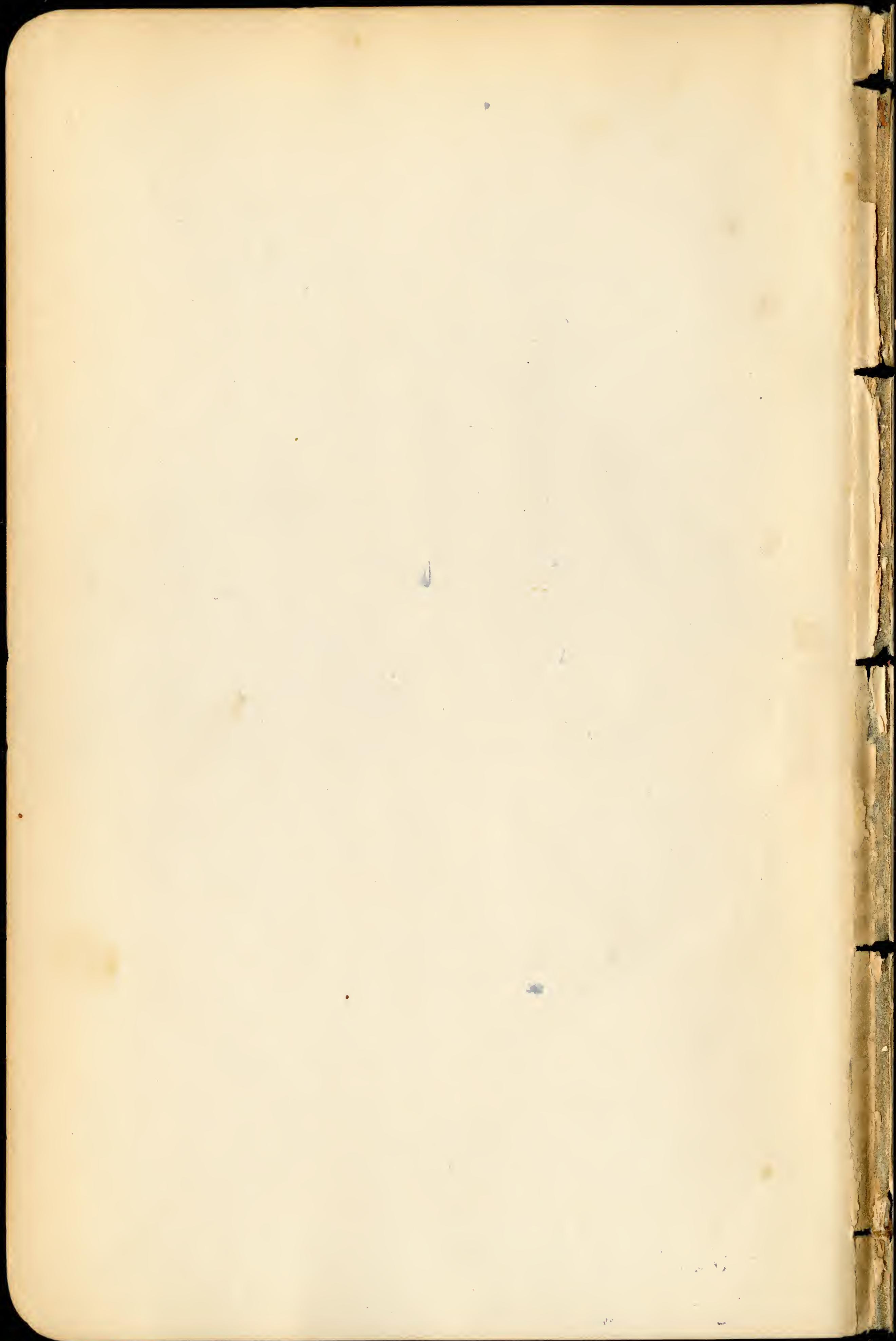


Coville Oregon

Journal

1898

[Pencil collection numbers added  
by H. St. John Apr. 1975.]





Woodland, Oregon, July 15, 1898.

Plants about camp.

*Acer macrophyllum*.

*Thuja plicata*.

*Larix oregana*

*Abies grandis*

*Populus trichocarpa*

*Corylus californica*

*Acer circinatum*

*Osmaronia cerasiformis*

*Rubus vitifolius*

*Rubus spectabilis*

*Symphoricarpos*

*Ribes atripes*

*Rosa macrocarpa*

*Cornus nuttallii*

*Crataegus rivularis*

*Rosa gymnocarpa*

*Berberis aquifolium*

*Amelanchier alnifolia*

*Spiraea douglasii*

*Rubus leucodermis*

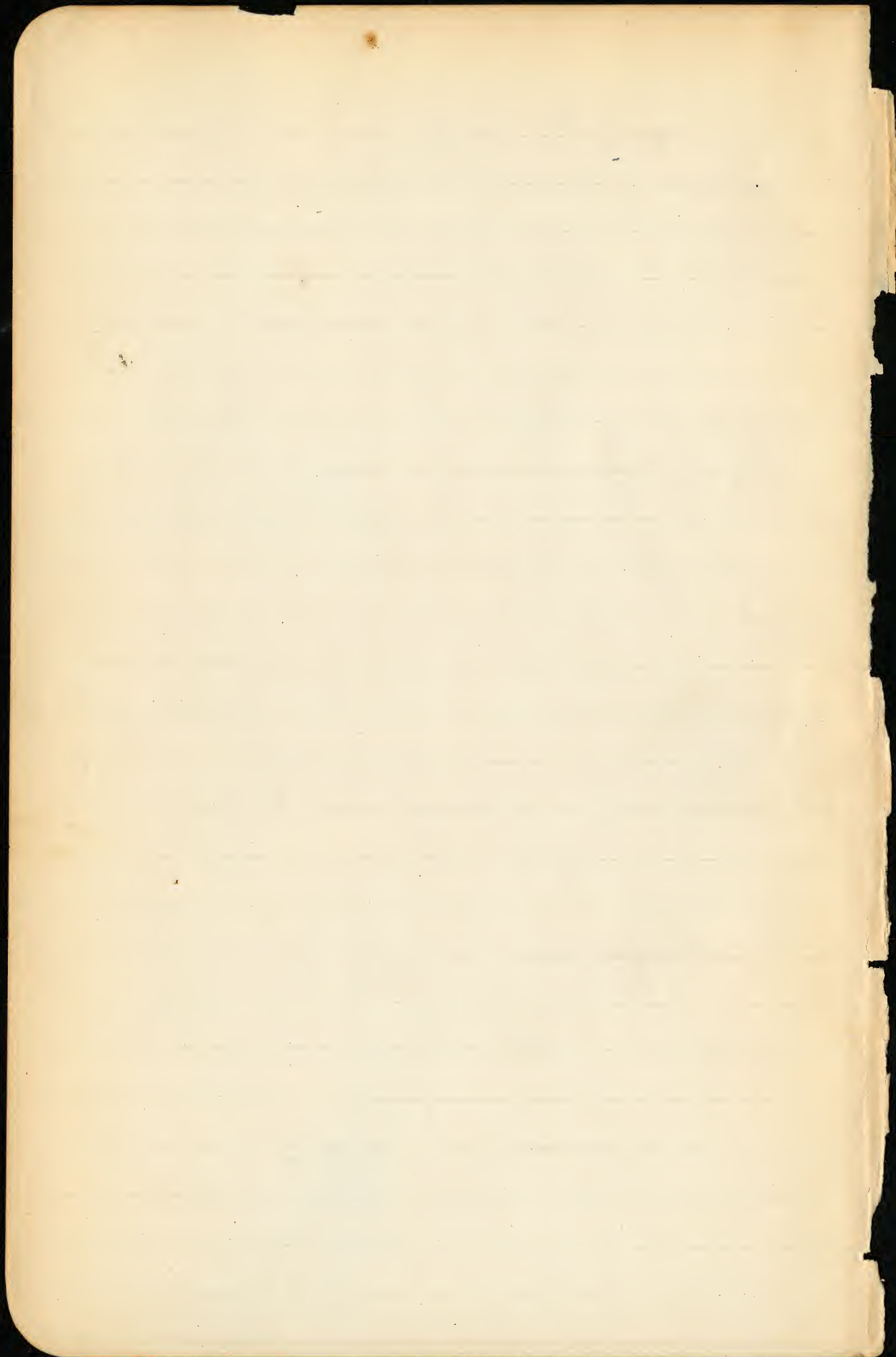
*Pyrus rivularis*

*Sambucus glauca*

*Philadelphus lewisii*

*Rhamnus purshiana*



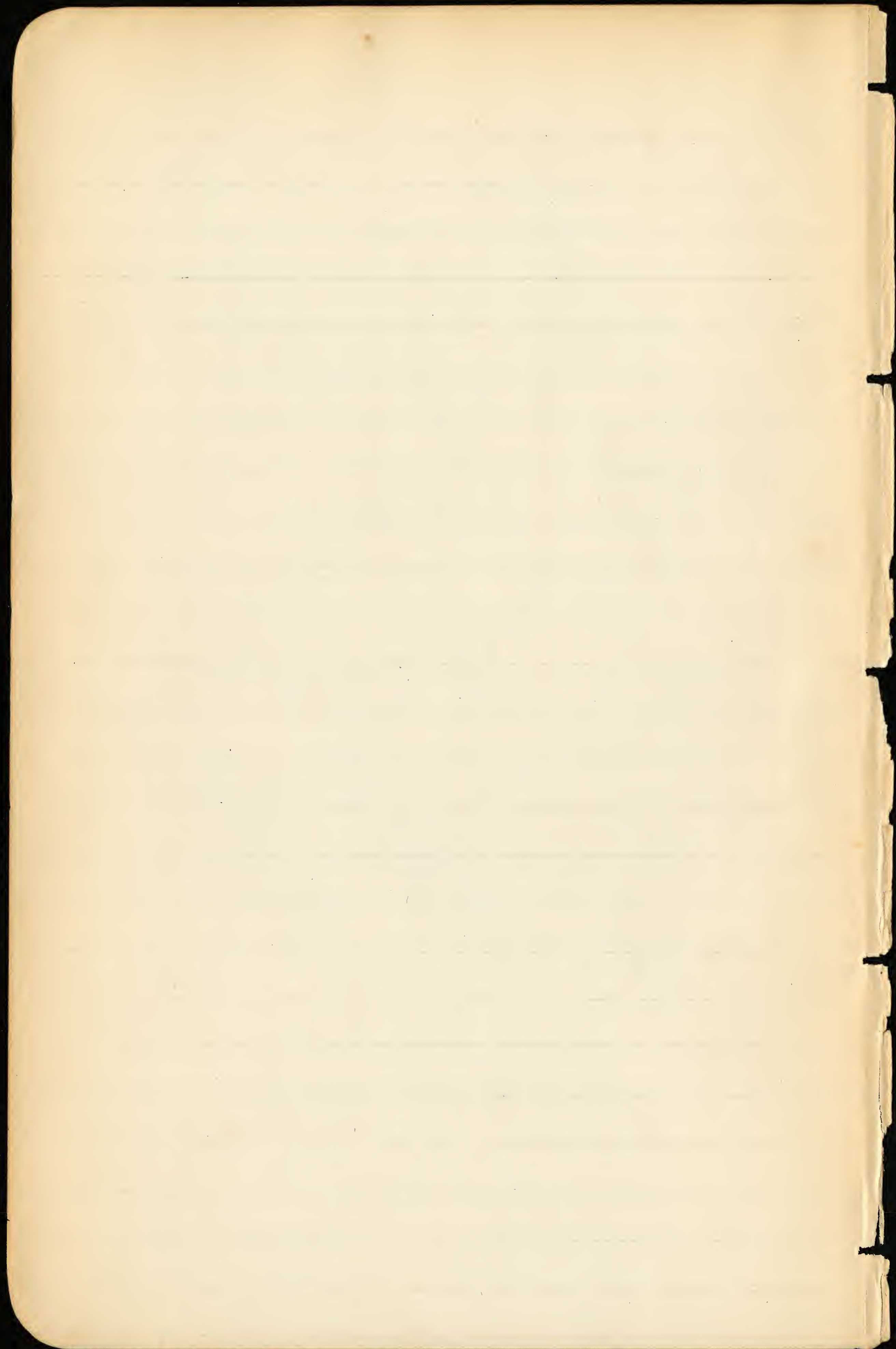




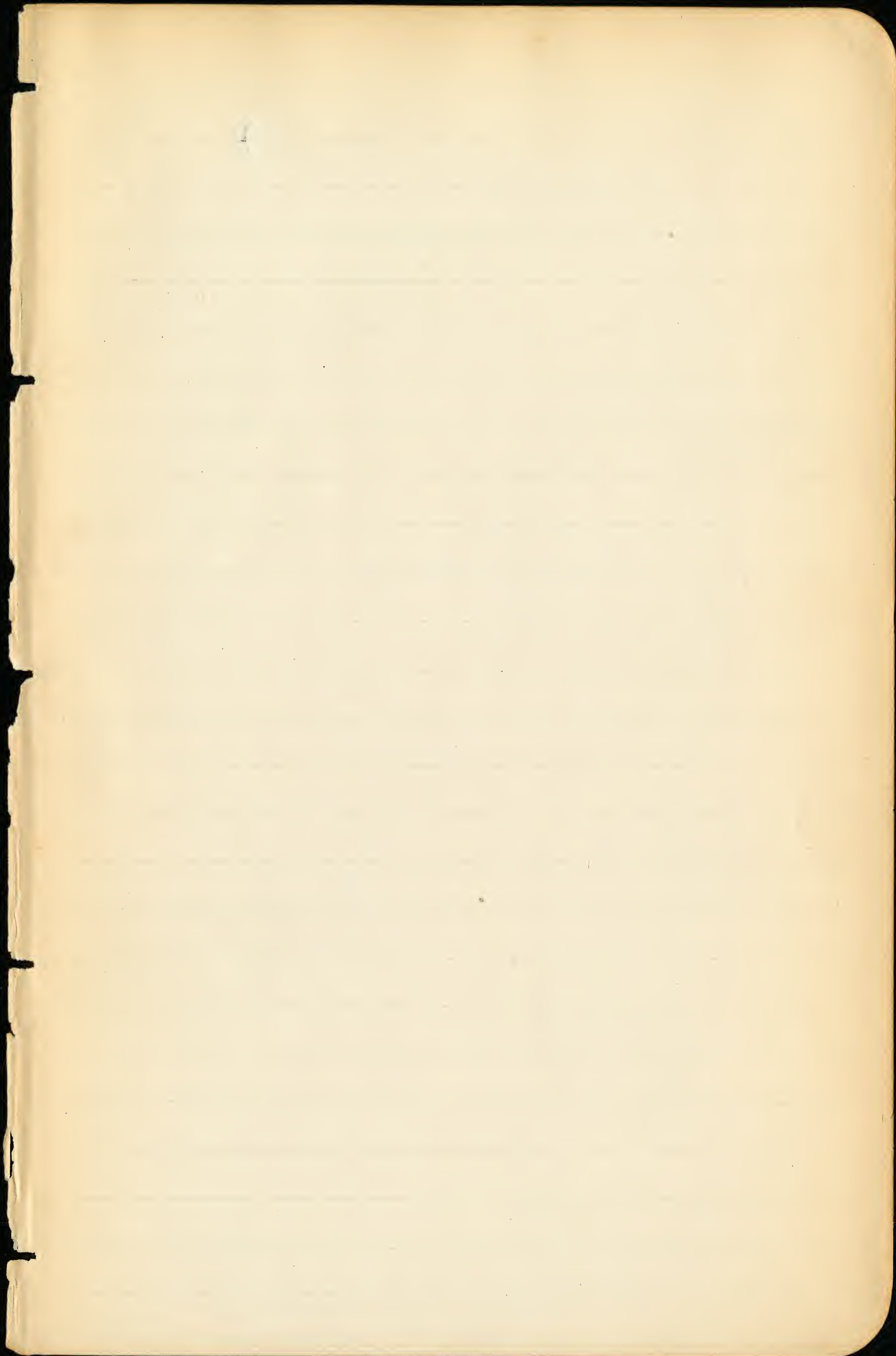
*Salix (mitchellii) scouleriana*  
*Lonicera ciliosa*

No. 701

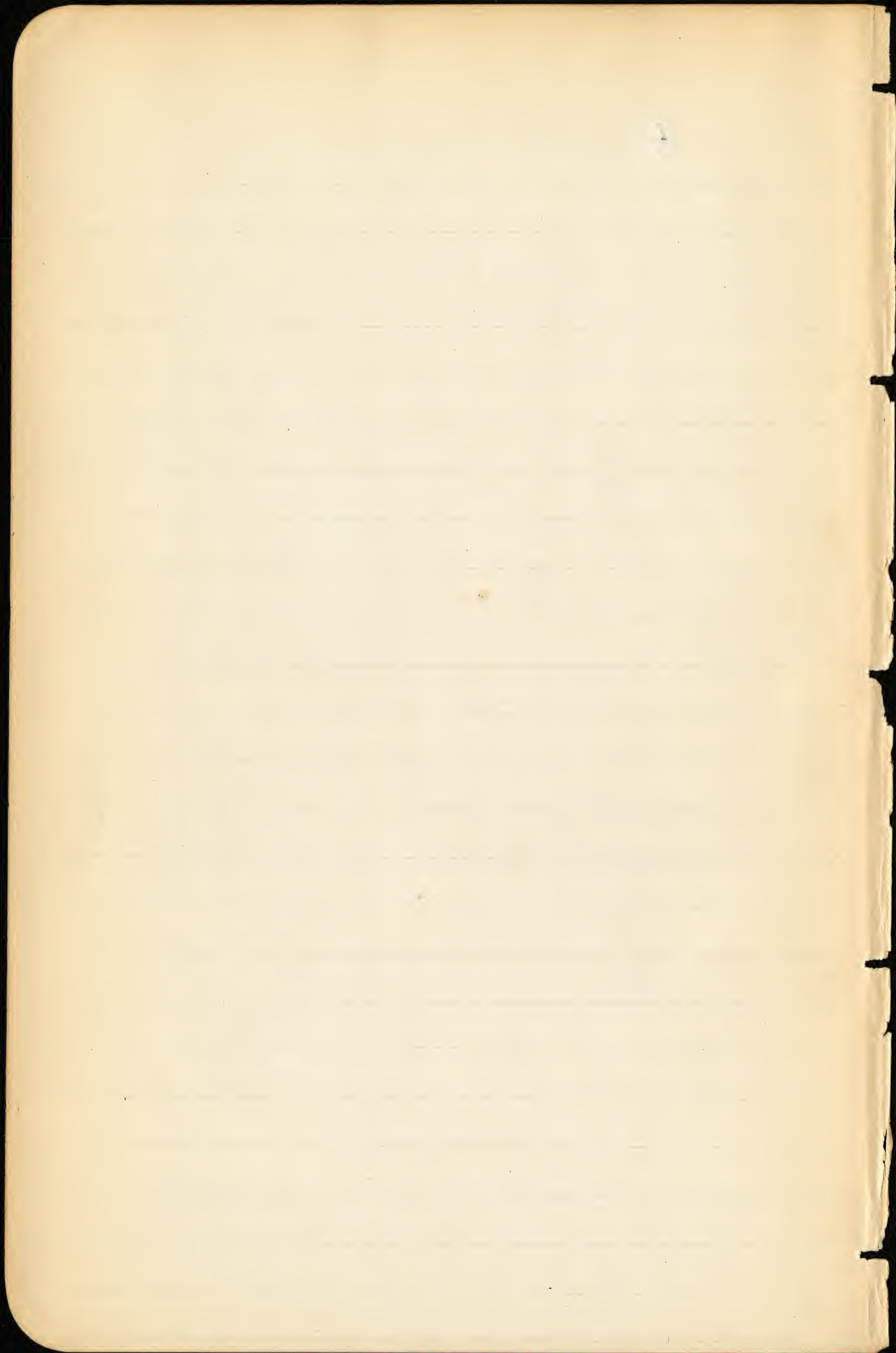




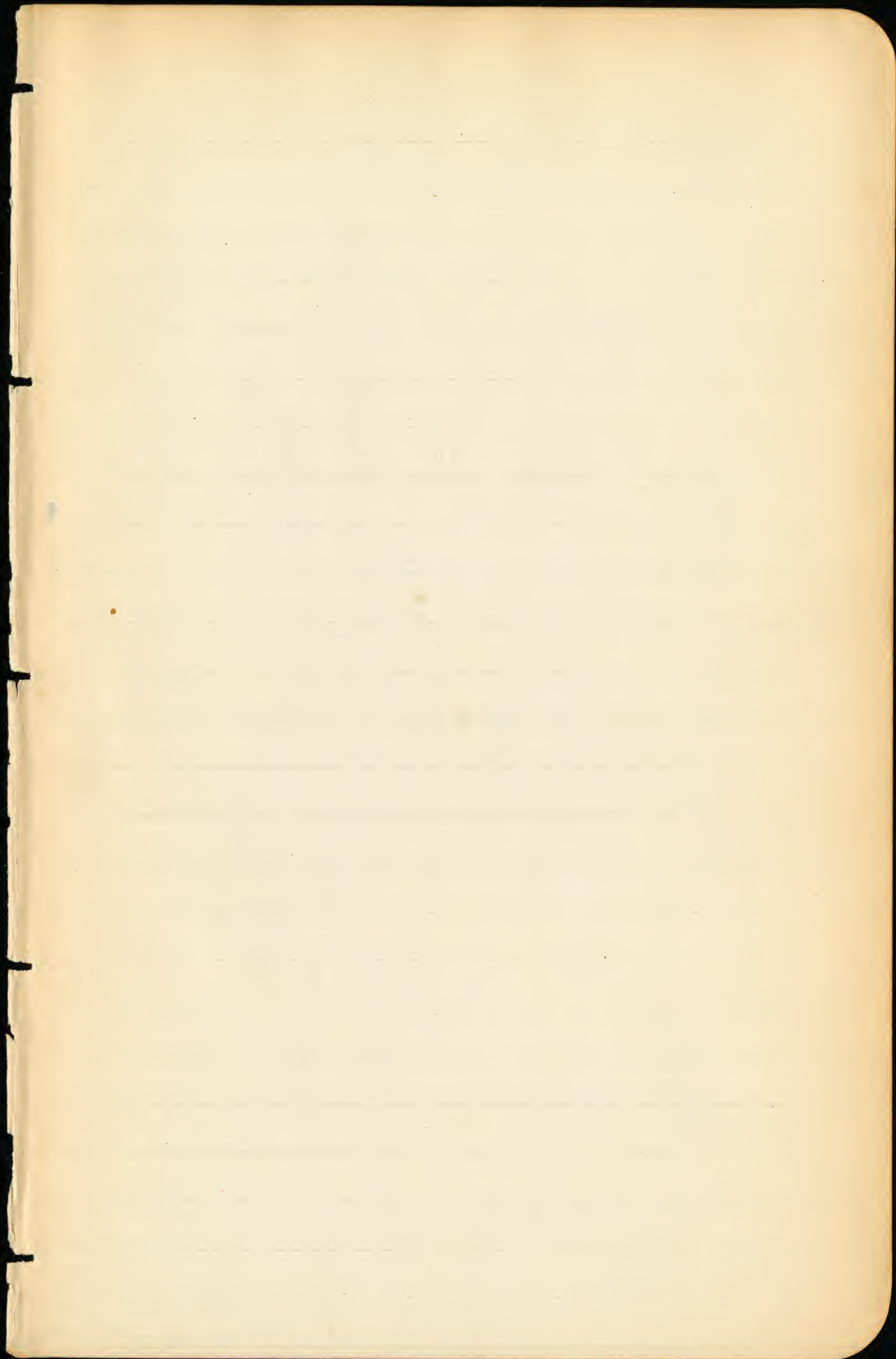




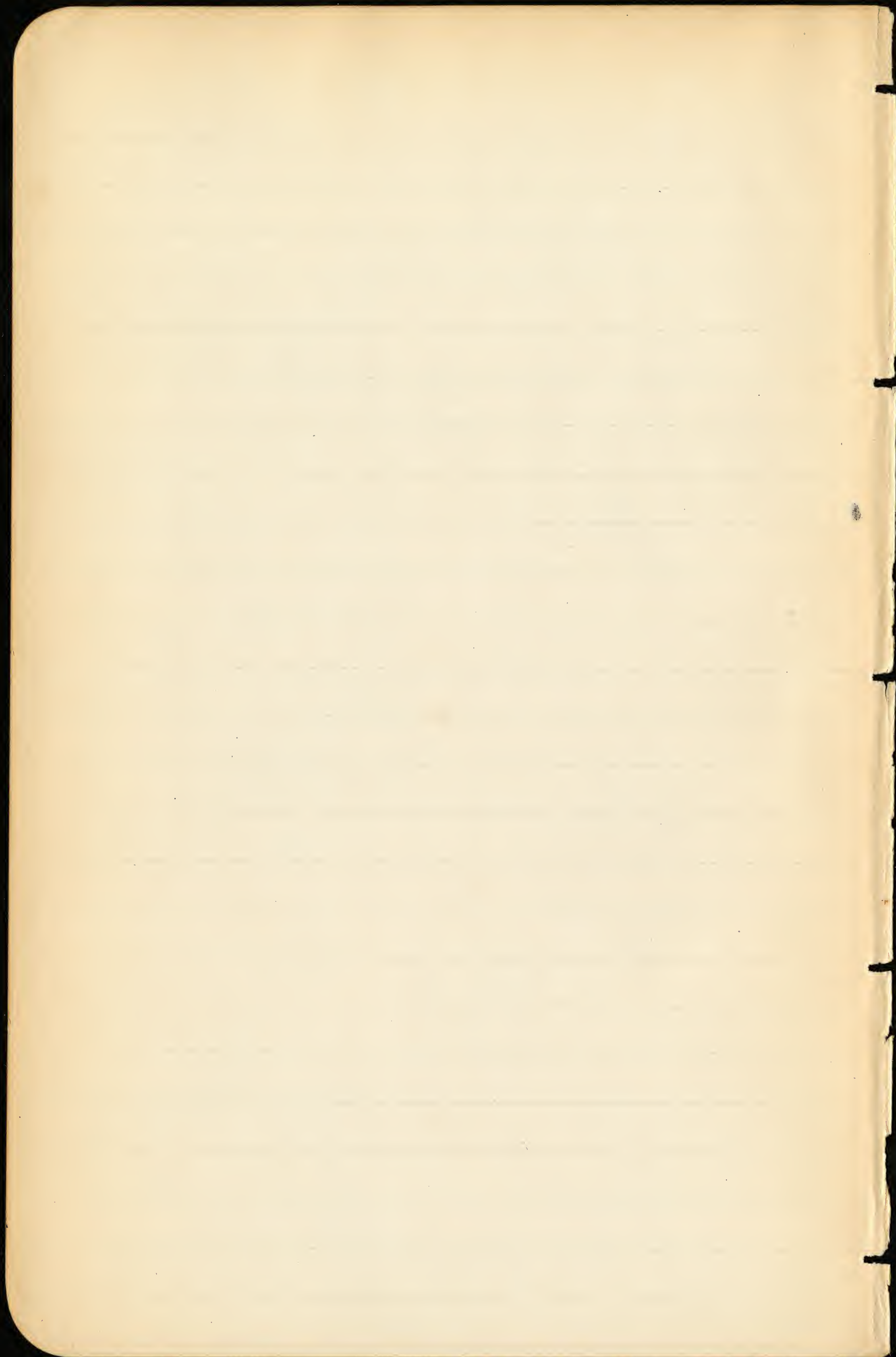








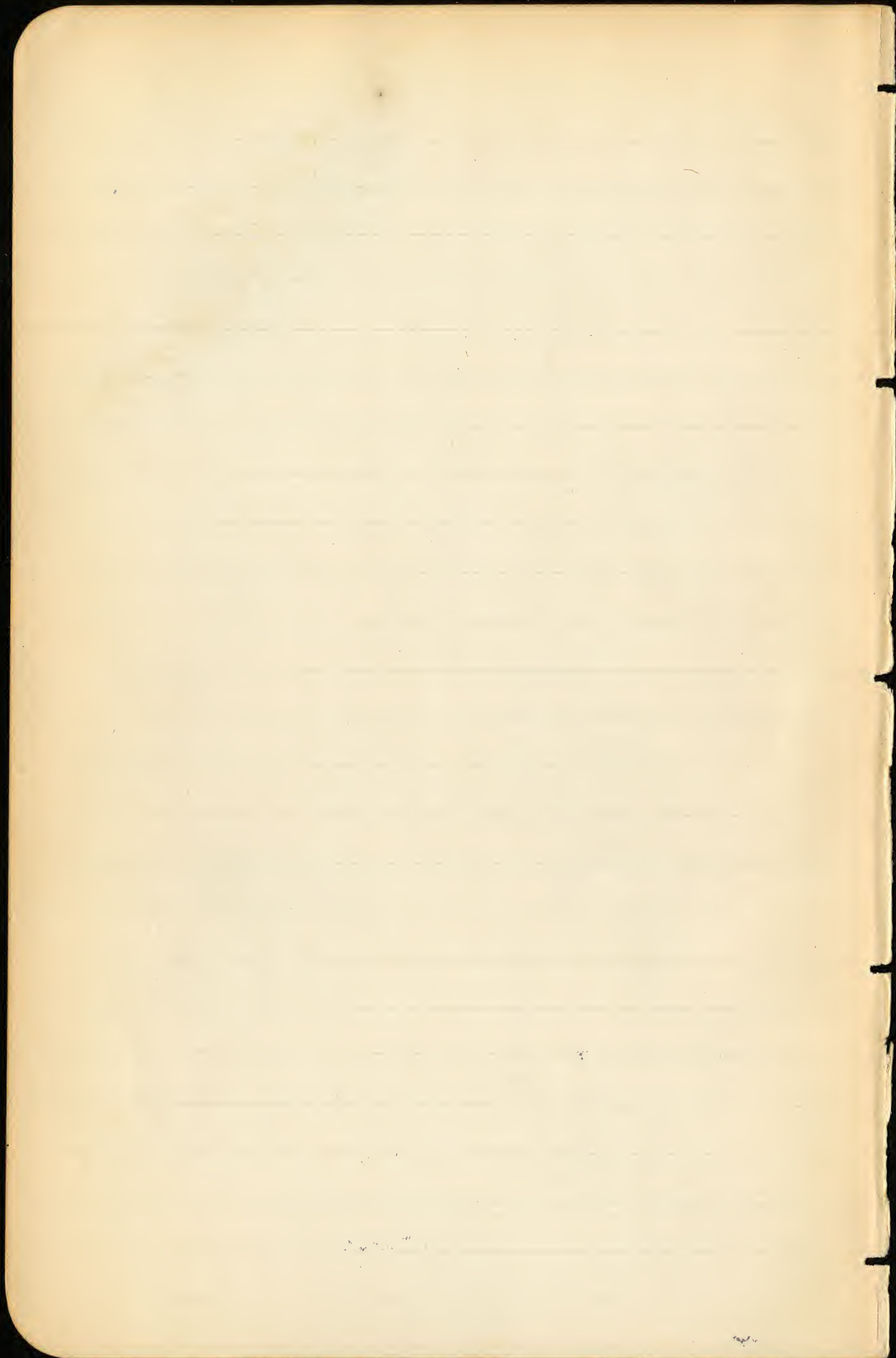














July 18, 1898.  
Camp at northeast corner of Lake Merrill.

In the water of the lake are.

*Ranunculus reptans*, in flower

*Botrachium*

*Polygonum amphibium* in flower sparingly

*Eleocharis palustris*

Around the lake are

*Populus trichocarpa*, fallen fruit hairy

*Alnus incana*

*Salix* (populoides) *lasiantha*

.. (discoloroides) *piperi*

No. 751

.. *longifolioides*

No. 752

.. (velutinus) *sitchensis*

*Cornus sanguinea*

*Spiraea douglasii*, in flower

Forest vegetation

*Tsuga heterophylla*

*Pseudotsuga mucronata*

*Thuja plicata* } Mostly near the lake

*Acer macrophyllum* } *Cornus nuttallii*

*Acer circinatum* } *Vaccinium papillosum* spring

*Berberis nervosa* } *Rosa seminifera*, in fruit

*Dryopteris muricata*?

*Oxalis* in fruit.



257



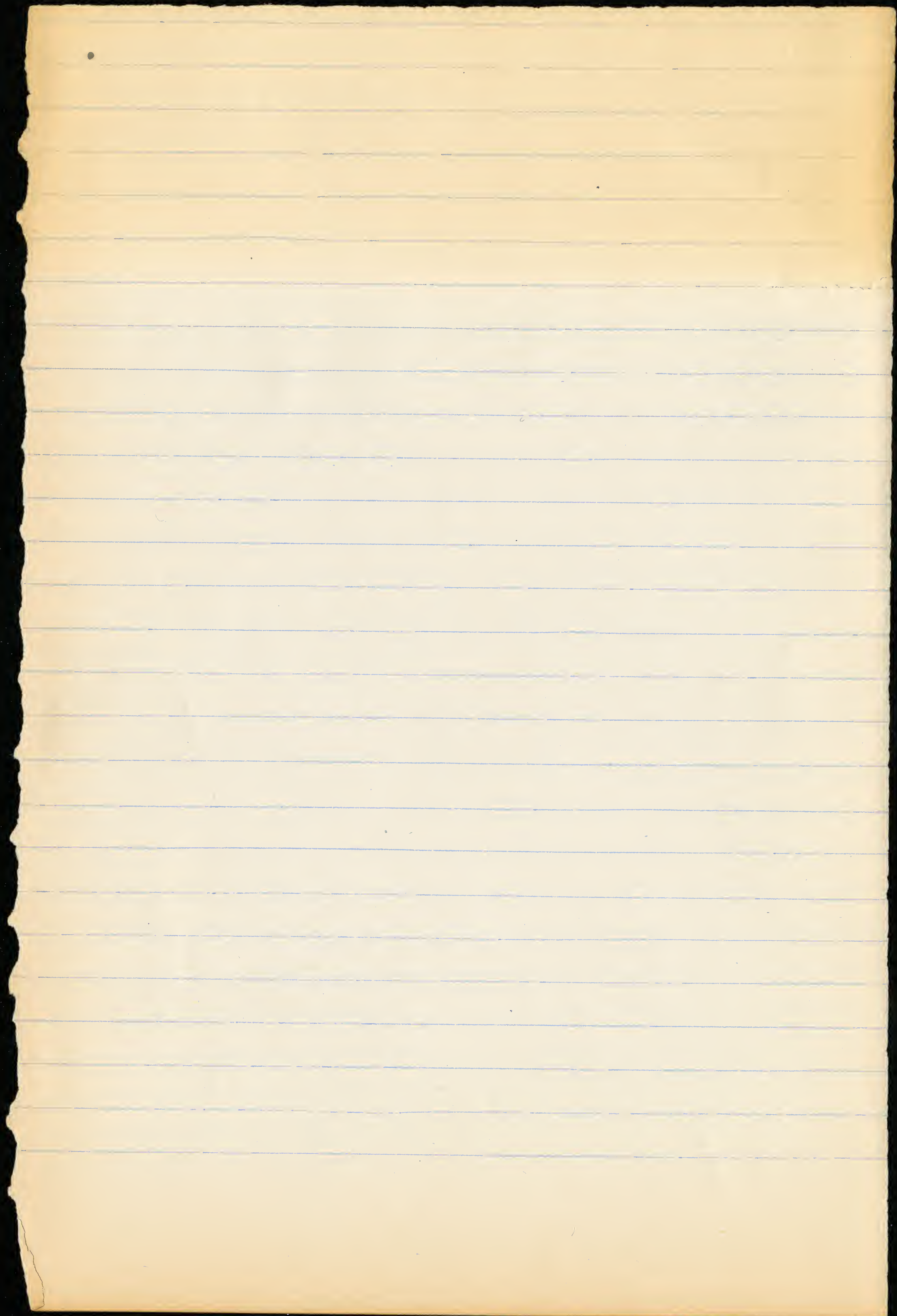
~~Ala~~

9a

Oregon

1898







*Achlys triphylla*. Leaf-texture of *Jeffersonia*. Young fruit  
*Triavella* , in flower.

*Viola orbiculata*!

*Clintonia uniflora*, past flowering

*Peranimum*

*Disporum* past flowering

*Vagnera simplex*, " "

*Coptis* in fruit

*Trillium* in fruit

*Pyrola*

*Rubus vitifolius*

Bottom at north end of lake, additional to above.

*Limnæa borealis*

*Lycopodium*

*Sorbus sambucifolia*

*Cornus canadensis*, past flowering

*Abies amabilis*

*Pedicularis ~~racemosa~~*, beginning to flower.

*Vancoveria* in fruit.

*Chimaphila umbellata*, in flower

*Tapus brevifolia*

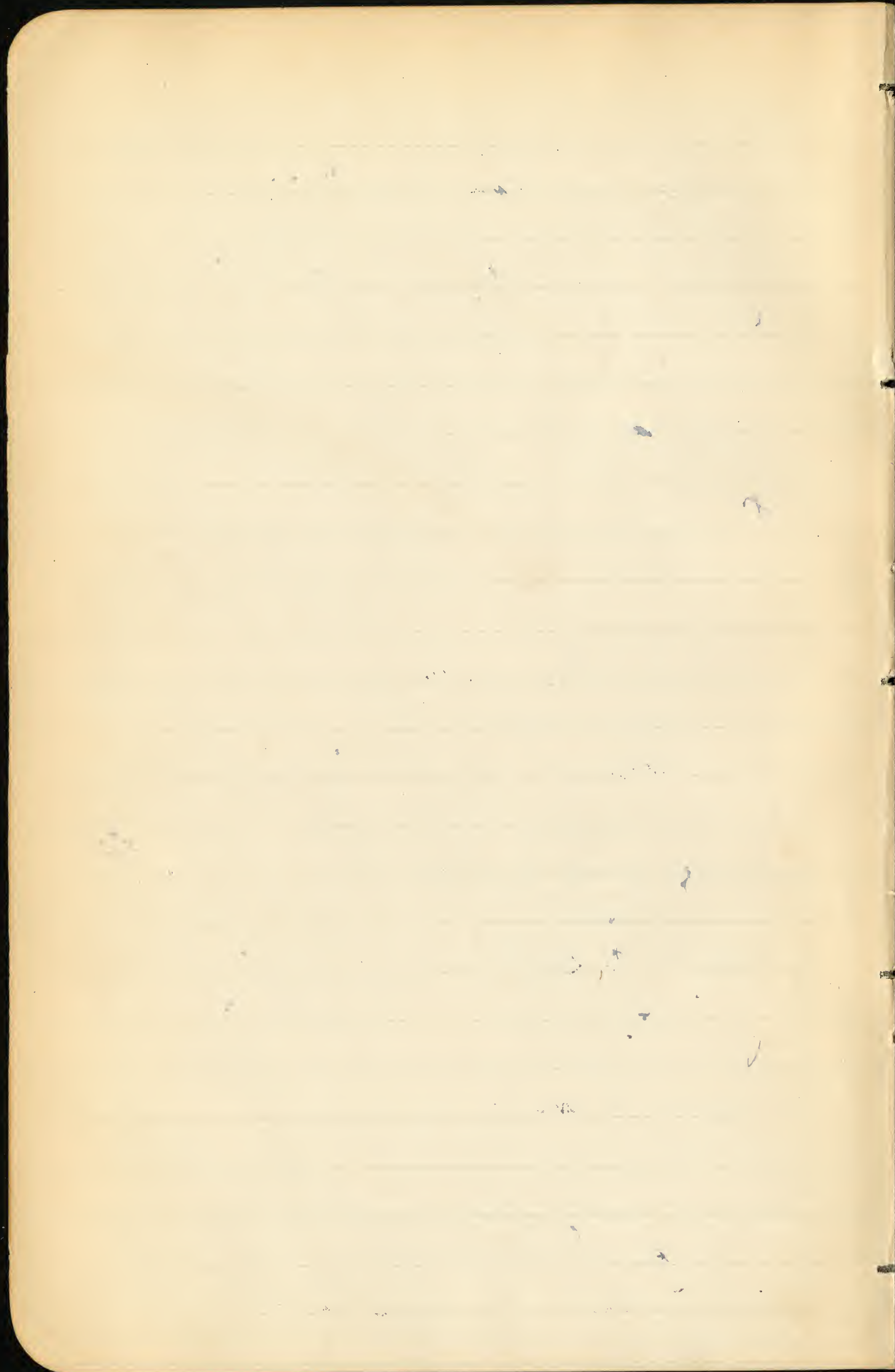
*Rhamnus purshiana*

*Adiantum pedatum*

*Stahtopus amplexifolius*?, with young fruit

*Osmorhiza cerasiformis*







Adenocaulon

Aruncus aruncus, past flowering

Alnus incana

Anemone nemorosa } Along a stream

Hydrophyllum

Phegopteris

Dryopteris

Actaea

Anemone trifolia, past flowering

" pedata

Tridentalis

Vagnera paniculata, with young fruit.

Lomaria

Corallorhiza in flower

Rubus spectabilis, along a stream, in fruit

Saxifraga? altissima " in flower

Rubus parvifolius " in fruit

Hylophthys in flower

Lilium columbianum in flower.

Pachystima

Gaultheria shallon

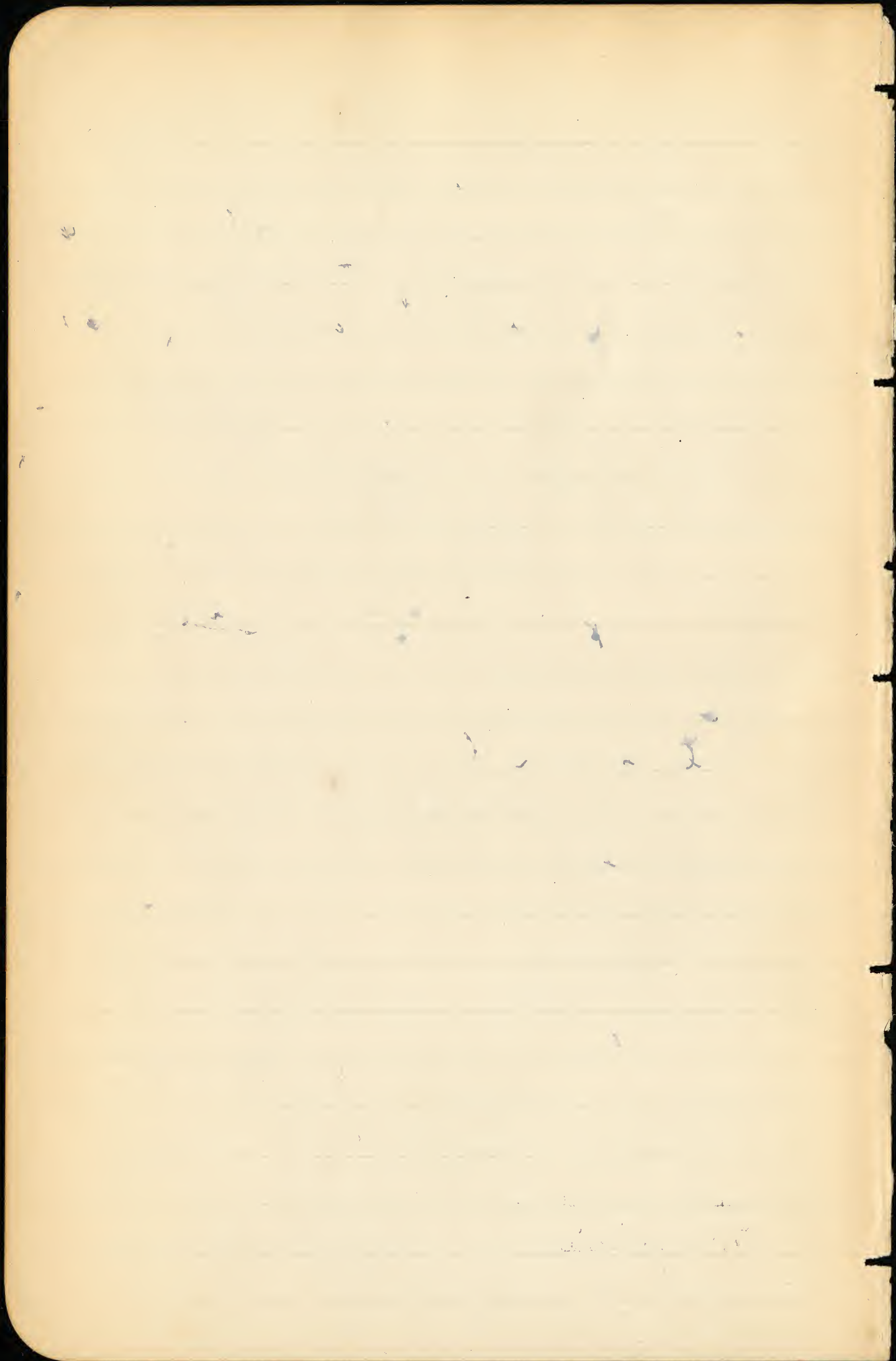
" ovatifolia

Lupinus

Arctostaphylos uva-ursi.

Pentstemon decumbens







Listera

Pinus monticola

At an elevation probably not 100 feet above the lake we came upon a gently sloping soil of volcanic drift the principal trees of which was

Pinus murrayana, with a small admixture of

Pinus monticola

Pseudotsuga mucronata

Larix heterophylla, the principal shrub being

Arctostaphylos <sup>nevadensis</sup> ~~nva~~ <sup>usci</sup>, with considerable

Vaccinium parvifolium,

Chimaphila umbellata, and in spots

Gaultheria shallon. We saw here for the first time

Vaccinium membranaceum, Gaultheria

Alnus sinuata

} straggles from above

Antennaria margaritacea

Hieracium albiflorum

Rumex acetosella

Epilobium angustifolium

Pyrola secunda.

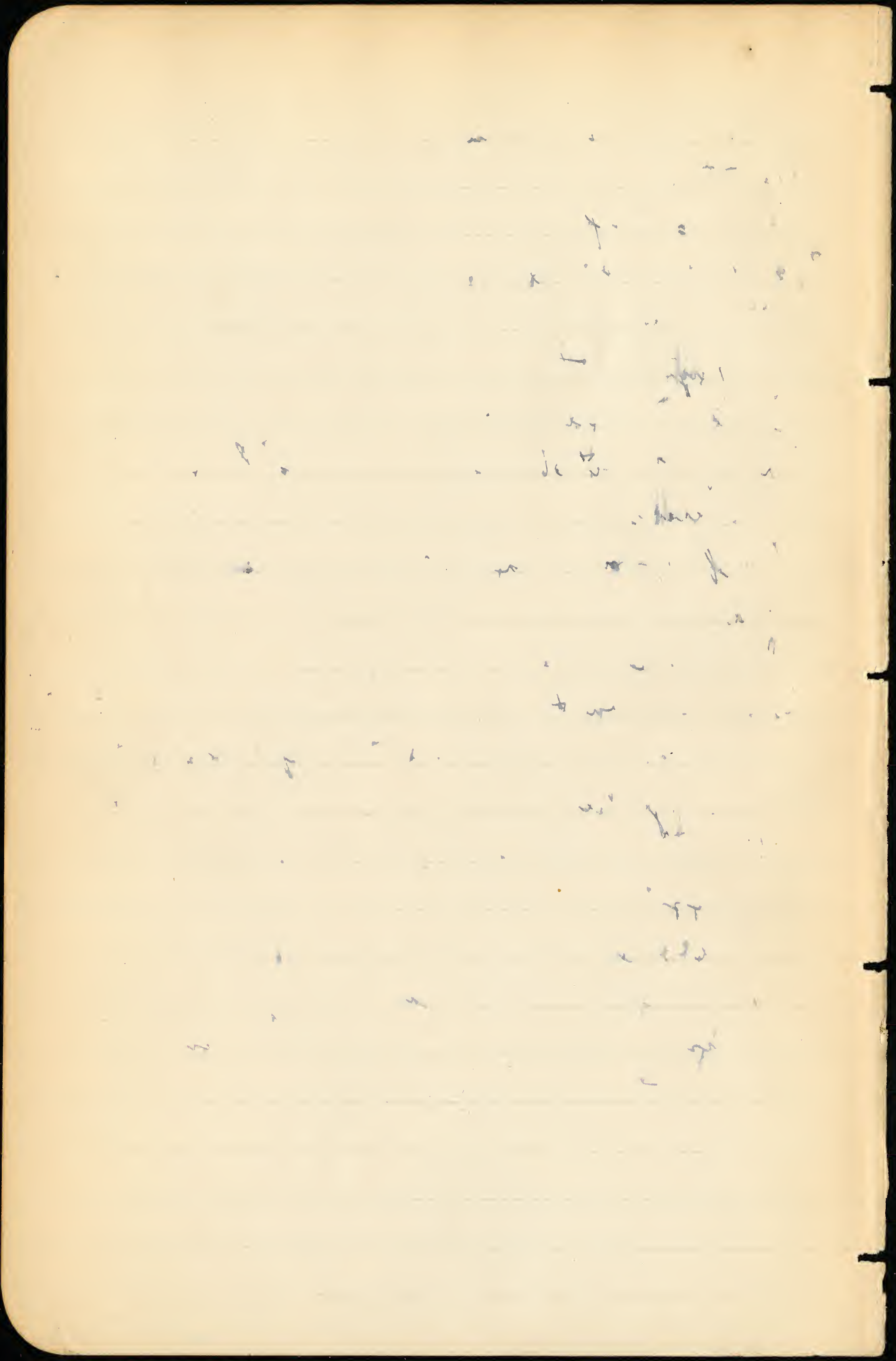
Crossing of the Kalama.

Messyusia

Along the Kalama

Allotropa







*Lupinus minimus*

*Pentstemon*

*Abies lasiocarpa*

Base of Goat Mountain

*Abies nobilis*

*Xerophyllum tenax*

*Castilleja miniata*

Slope of Mount St Helens, on exposed lava

*Holodiscus*

*Cryptogramma acrostichoides*

*Phlox*

*Juniperus nana*

Along a rivulet in *Abies lasiocarpa*, *and P. murrayana*, *Pinus monticola*,

*Sambucus leucocarpa*, nearly past flowering

*Viola glabella*, past flowering

*Aquilegia formosa*, in flower

*Artemisia*

*Epilobium* in bud.

*Veronica* ~~off~~ *serpyllifolia*

*Mimulus lewisii*? much in bud

*Veratrum viride*.

Besides things collected.  
On dry ground

*Calochortus subalpinus*

*Polygonum Hartwegii*

*Juncoides campestris*

*Juncus parryi*

} Collected 765  
766



*Podystima nysinites*

*Pteris aquilina lanuginosa*

*Acer circinatum*

*Vagnera paniculata*

*Viola glabella.*

*Chimaphila menziesii*, under *Abies nobilis*.

*Pedicularis racemosa*



*Eucephalus*

*Eriogonum pyrolaeifolium*

*Fragaria*

*Luethera pectinata*

*Bryanthus empetrifolius*

*Hieracium gracile.*

Near the lower camp.

*Corallorhiza*

*Ribes bracteosum*



Of these the plant ~~with~~ standing the greatest degree of  
acidity is Eriogonum pyrolaeifolium.



July 19, 1898.

Mount St. Helens

Plants of the lava drift at timber line

*Eucephalus* , collected

*Eriogonum pyrolaeifolium*

*Lupinus* *exaltatus* Gray, collected yesterday 769

*Polygonum* " " "

*Phlox diffusa* ssp *longistylis* " " 767

*Juncus parryi*

*Agoseris aurantiaca* (Hook.) Greene collected yesterday 810

*Pseudanemone angustatum* (C. R.) S. & J. 756

*Castilleja coccinea* Piper. T. & G. 768

*Spraguea* " "

*Luethia pectinata*

*Pentstemon scrofulatus* new series *menziesii*-like, collected yesterday 774

*Achillea millefolium*

*Poa* , collected

*Carex* " "

*Elymus* ? " "

*Tritium* ? *spicatum* (L.) Richt collected 796

Grass " "

On rocky and somewhat moist slopes

*Lupinus*

*Xerophyllum*

*Vaccinium membranaceum* Greene

*Erysimum capitatum* (Donk.) Greene collected yesterday 777



Mr. Johnson found  
*Pulsatilla occidentalis*  
no specimen



Pentstemon

not like *menziesii*, coll. yu

*Spiraea obuscula*

*Gilia nuttallii*

*Arnica*

At base of rocks

*Phyllodoce gland* ~~gland~~ *erubetiformis*

785

On rocks

*Phyllodoce glanduliflora*

782

*Juniperus nana*

*Cryptogramma*

*Oxyria*

*Campanula*

*Heuchera*

*Lycodium*, with the two *Phyllodoce*s, coll.

also

*Geranium albiflorum*

*Fragaria cuneifolia* Nutt. collected 806

*Aspidium lonchites*

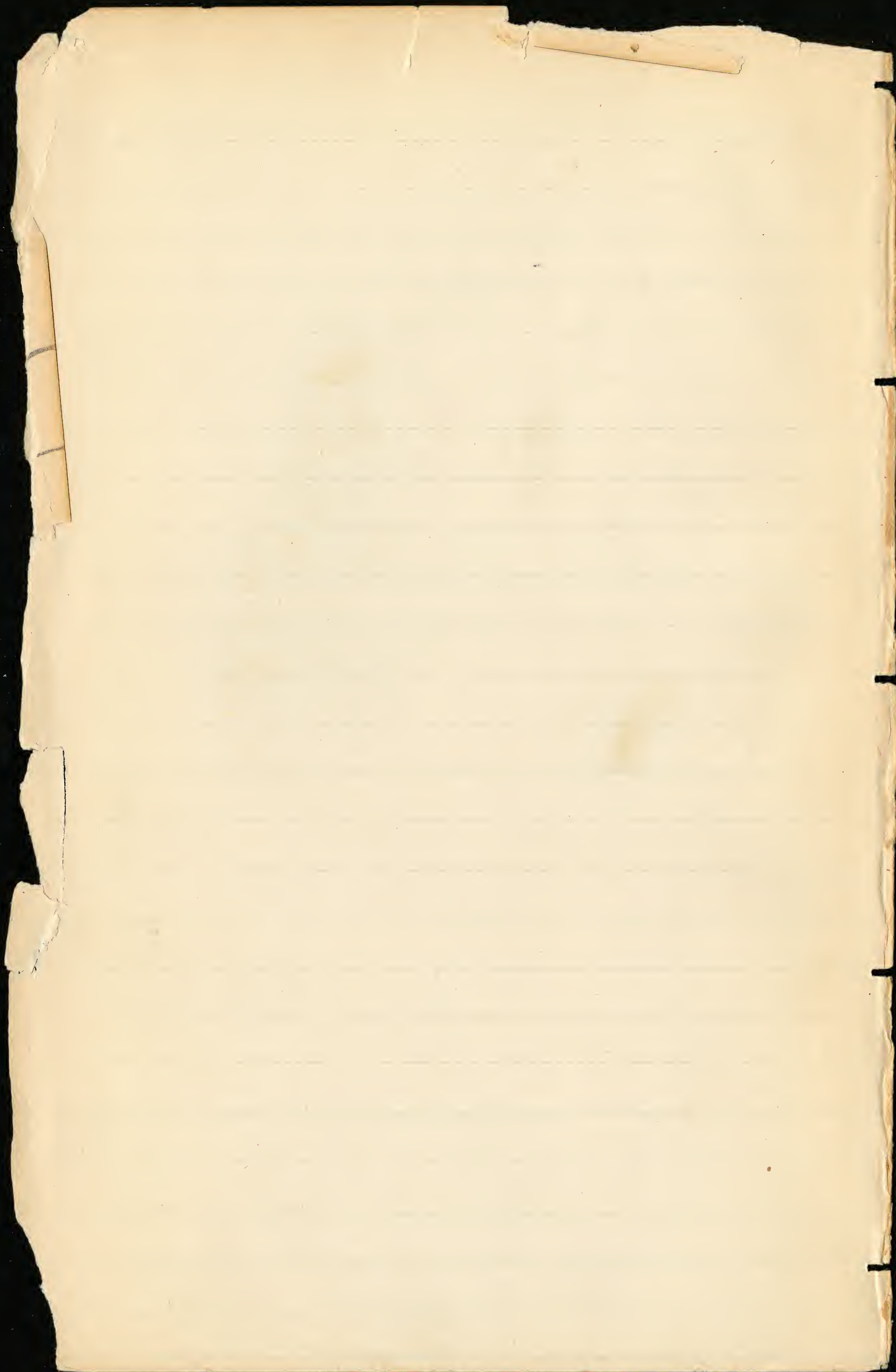
*Antennaria media* Greene collected 805

Form of *Abies lasiocarpa* near timber line some times as follows:



Note naked trunk on up-hill side. This shows where sliding snow has broken off the branches







and then the characteristic lava drift vegetation of timber-line

The shrub going highest up is

*Phyllodoce empetrifolia*, and the next is

*Sorbus occidentalis*

Above timber-line, <sup>and above the lava drift vegetation,</sup> ~~are~~ many places where alpine plants of many kinds might grow, but these sheltered rocky nooks are occupied only by

*Saxifraga tolmiei*; and

*Juncus parryi*, both of which are abundant

The following were seen above the limit of trees, in addition to those just mentioned in the descent

*Vaccinium membranaceum*

*Agoseris aurantiacum*, not seen going up

*Antennaria alpina*

*Castilleja*

*Eucephalus*

Unknown grass collected to-day

*Elymus*

*Cryptogramma*

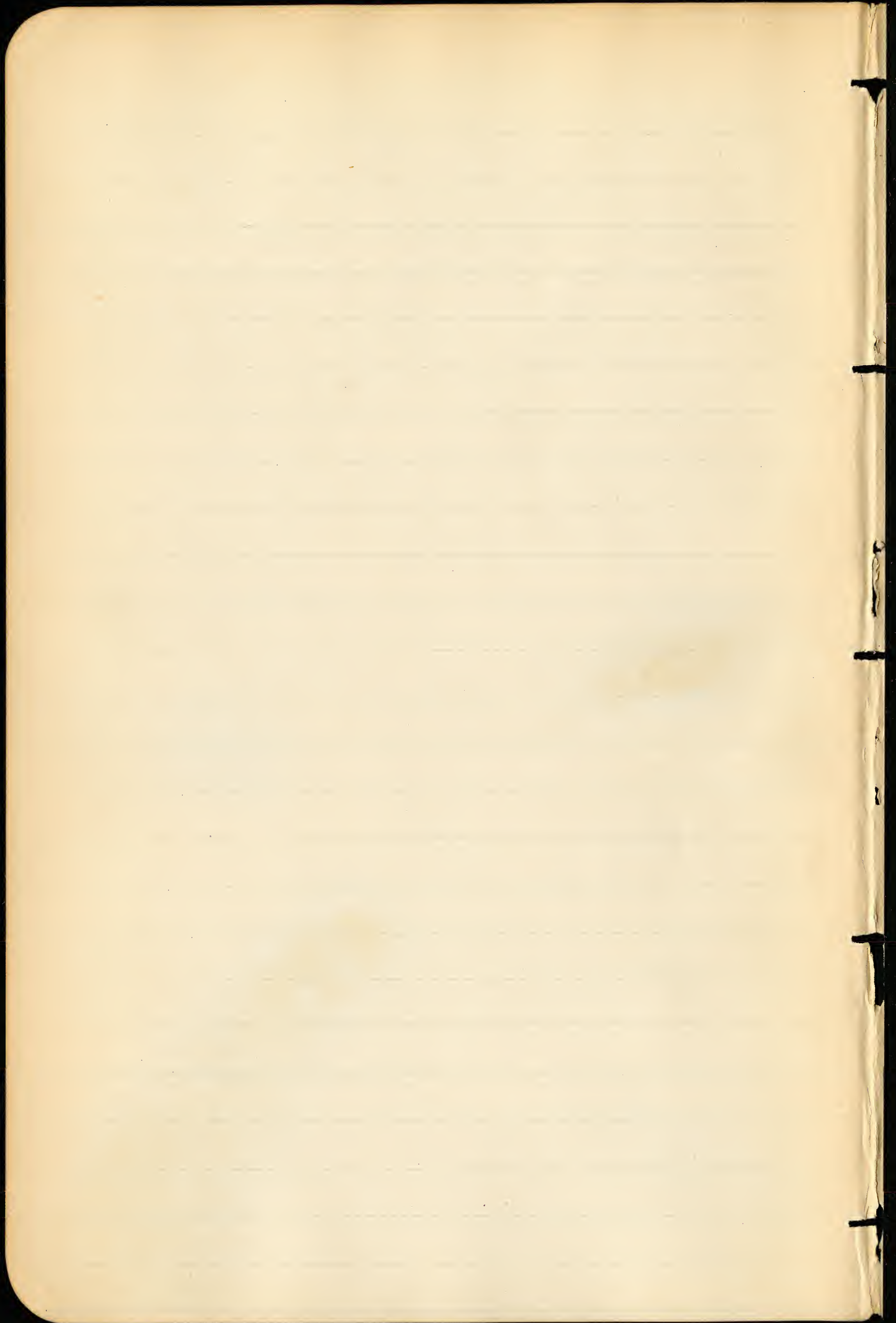
*Leucis pectinata*.

*Pseudotsuga martindalei*

The trees growing at timber line are

*Abies lasiocarpa*, and





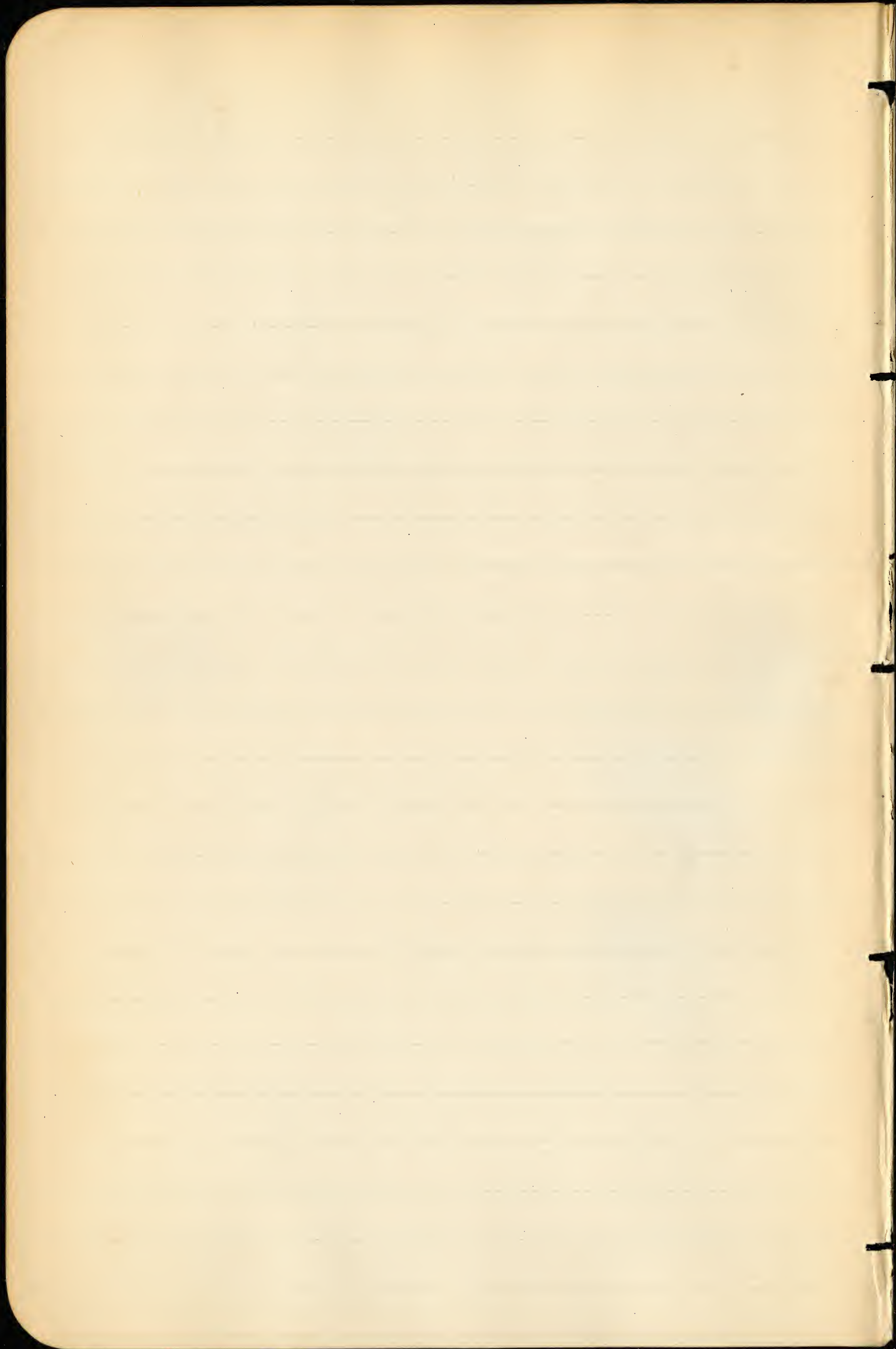


*Pinus murrayana*, while <sup>no specimen</sup>  
*Pinus monticola* and  
*Abies nobilis* are so close as almost to  
reach timber line. <sup>no A. procera Rehd. - no specimen</sup>

The fact that the flora of Mount St. Helens is very sparse is doubtless due to the youth, geologically speaking, of the mountain. This results in

1. Aridity of the soil
2. Instability of the soil and rocks, due to rapid erosion.
3. Sterility of the soil, and
4. Perhaps to the inability of the mountain to stock itself <sup>with alpine</sup> plants during the glacial period.







July 20, 1895

Mount St. Helens, Skamania Co., Wash.

Made a trip up the mountain southeastward from Three Buttes camp.

Plants in general same as yesterday. The following were seen highest:

*Eriogonum pyrolaeifolium*

*Spraguea umbellata*

*Juncus parryi*.

*Saxifraga tolmiei* was also seen high up.

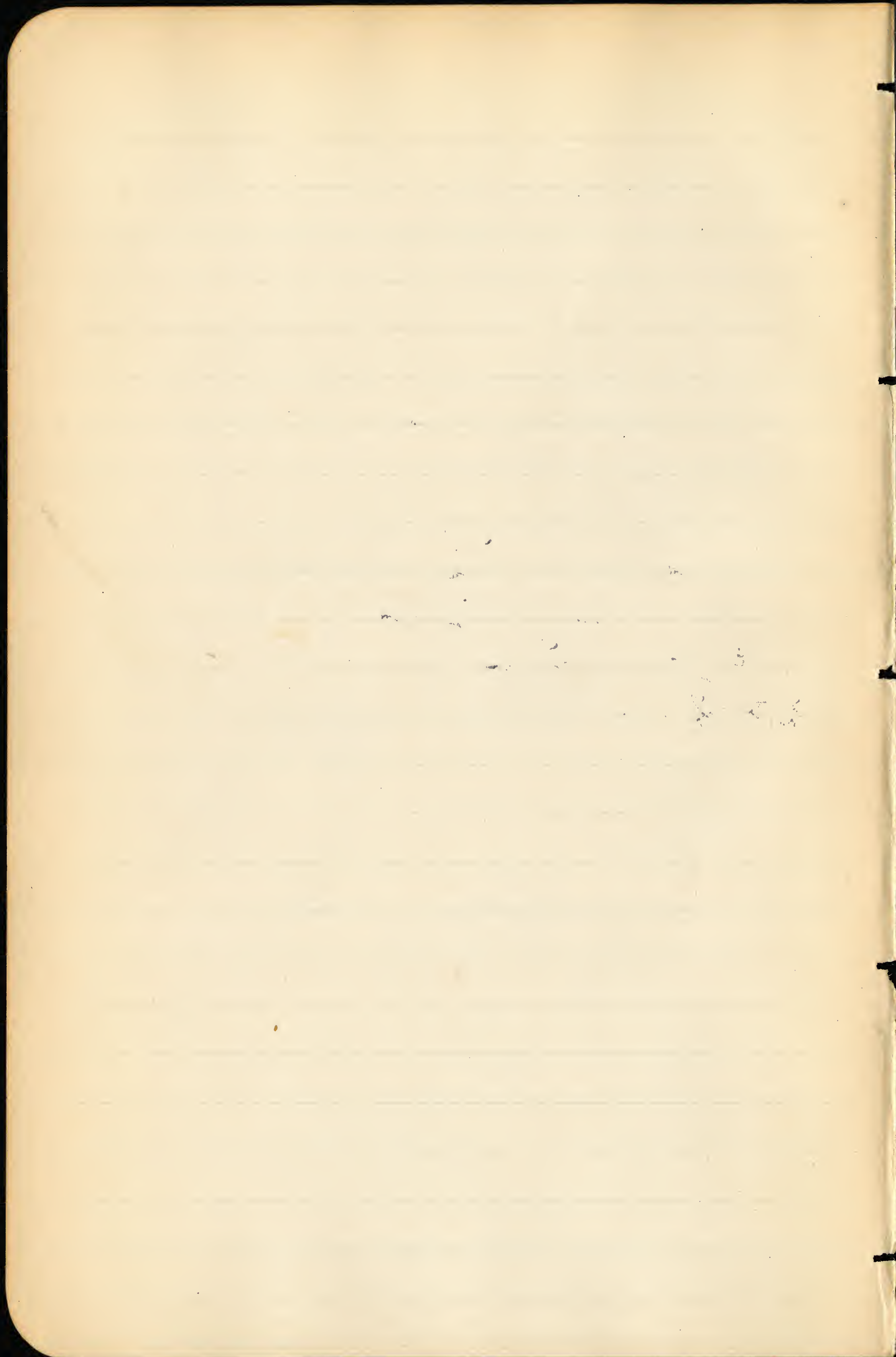
*Achillea millefolium* was seen above timber line

*Abies nobilis* was seen at timber line

Visited a crag or butte about two or three miles <sup>southeast</sup> from camp, jutting out from the mountain near its base. The northeast slope is covered with a vegetation chiefly of Phyllodoce empetrifolia, and it may therefore be called "Feather Butte".

On slopes having reached a ~~considerable~~ considerable degree of stability and fed by a sufficient amount of snow water to keep the ground moist all summer, Luethkea pectinata and ~~Bryum~~ Phyllodoce empetrifolia take an early hold and the latter especially forms humus rapidly. These are apt to be followed by







*Xerophyllum tenax*

*Vaccinium membranaceum*,

*Sorbus occidentalis*, and other shrubs,  
if the elevation is not too high for them.  
This is the case on Heather Butte.

A Lupinus not seen before was col-  
lected ~~in~~ open spots of the heather here.

On the way back to camp, at the  
base of the lava flows

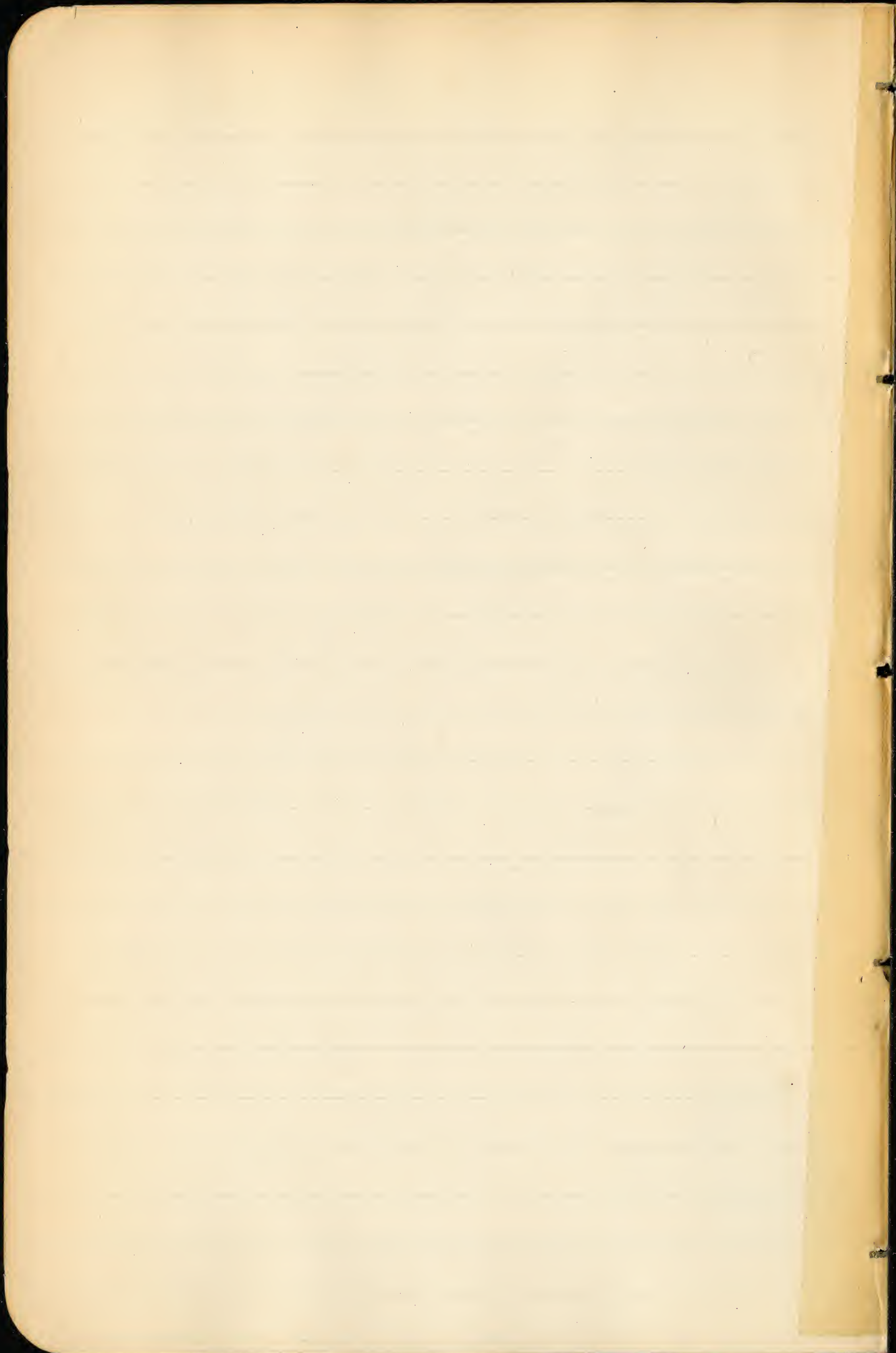
*Abies amabilis*

*Clintonia uniflora*

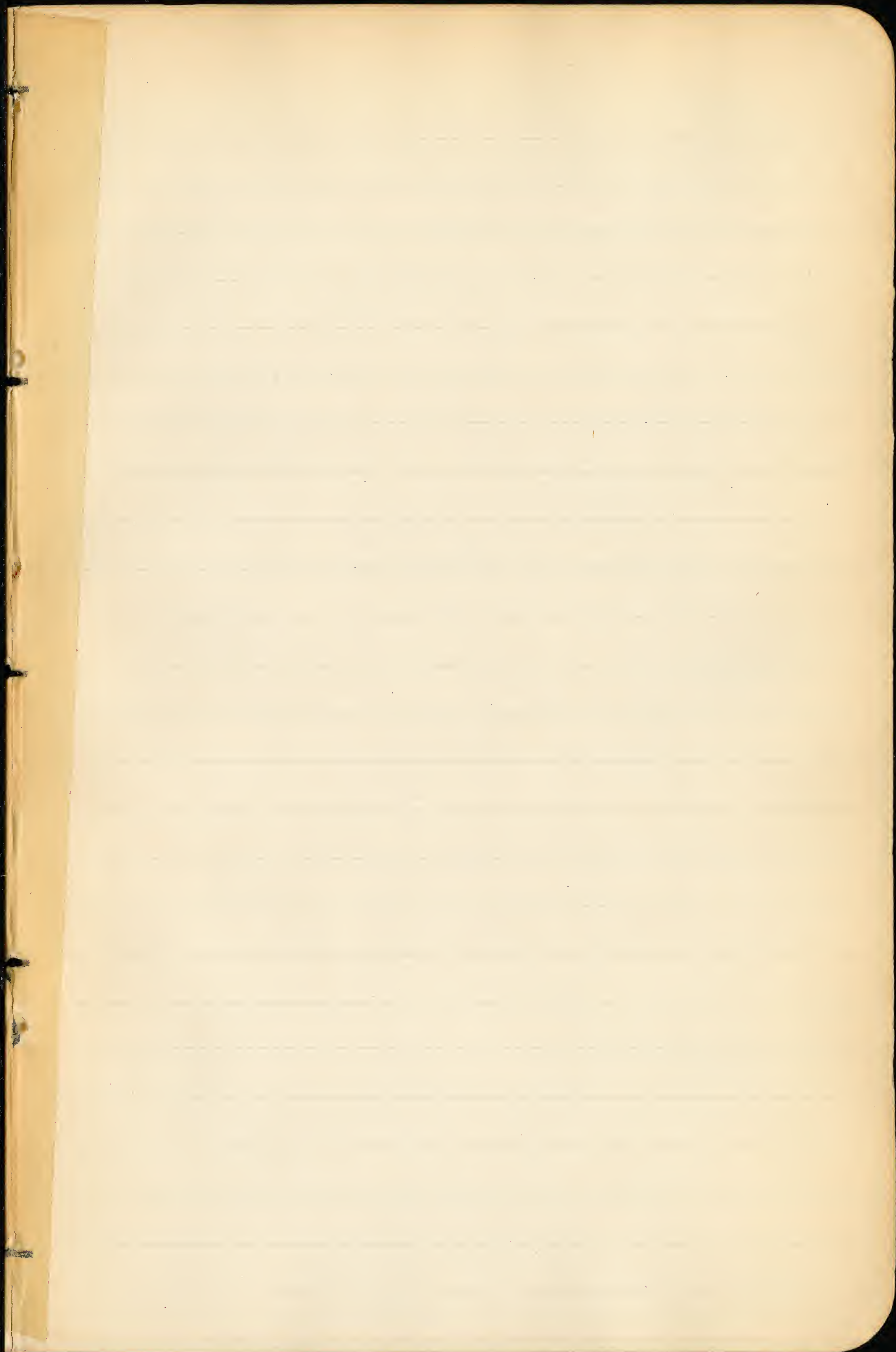
*Erythronium*, sometimes  $4\frac{1}{4}$   
 $3\frac{1}{2}$  inches from  
tip to tip of extended petals.

*Abies lasiocarpa* 8 ft.  $3\frac{1}{4}$  in circumference,  
about 70 feet high and top broken off at  
8 inches

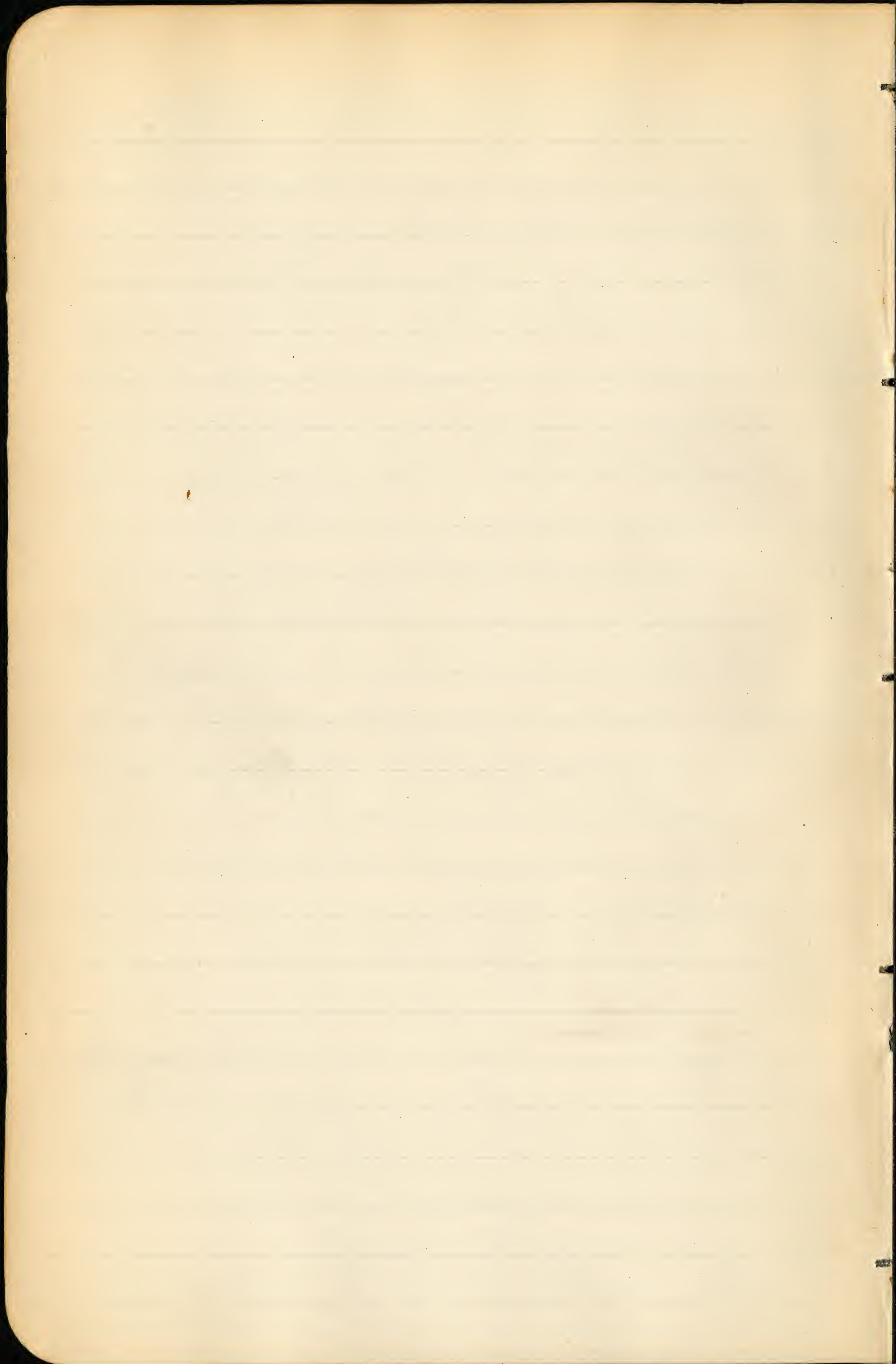














July 27, 1898.

Salem, Oregon.

Arrived from Portland last night. Saw Mr. Minto. This morning saw Mr. Minto and then drove over to Judge Wallis at Madray. In the afternoon drove back, saw Captain Ormsby and Mr. Davenport.

Between Madray and Salem saw the following trees and shrubs.

*Quercus garryana*

*Pseudotsuga mucronata*

*Acer macrophyllum* (planted?)

*Salix nuttallii*

*Corylus californica*

*Rosa pisocarpa*

*Rosa macrocarpa*

*Spiraea douglasii*

*Holodiscus triaefolius*

*Crataegus rivularis* - douglasii

*Lapinus oregana*

*Pyrus rivularis*

*Ceanothus sanguineus*, only a little

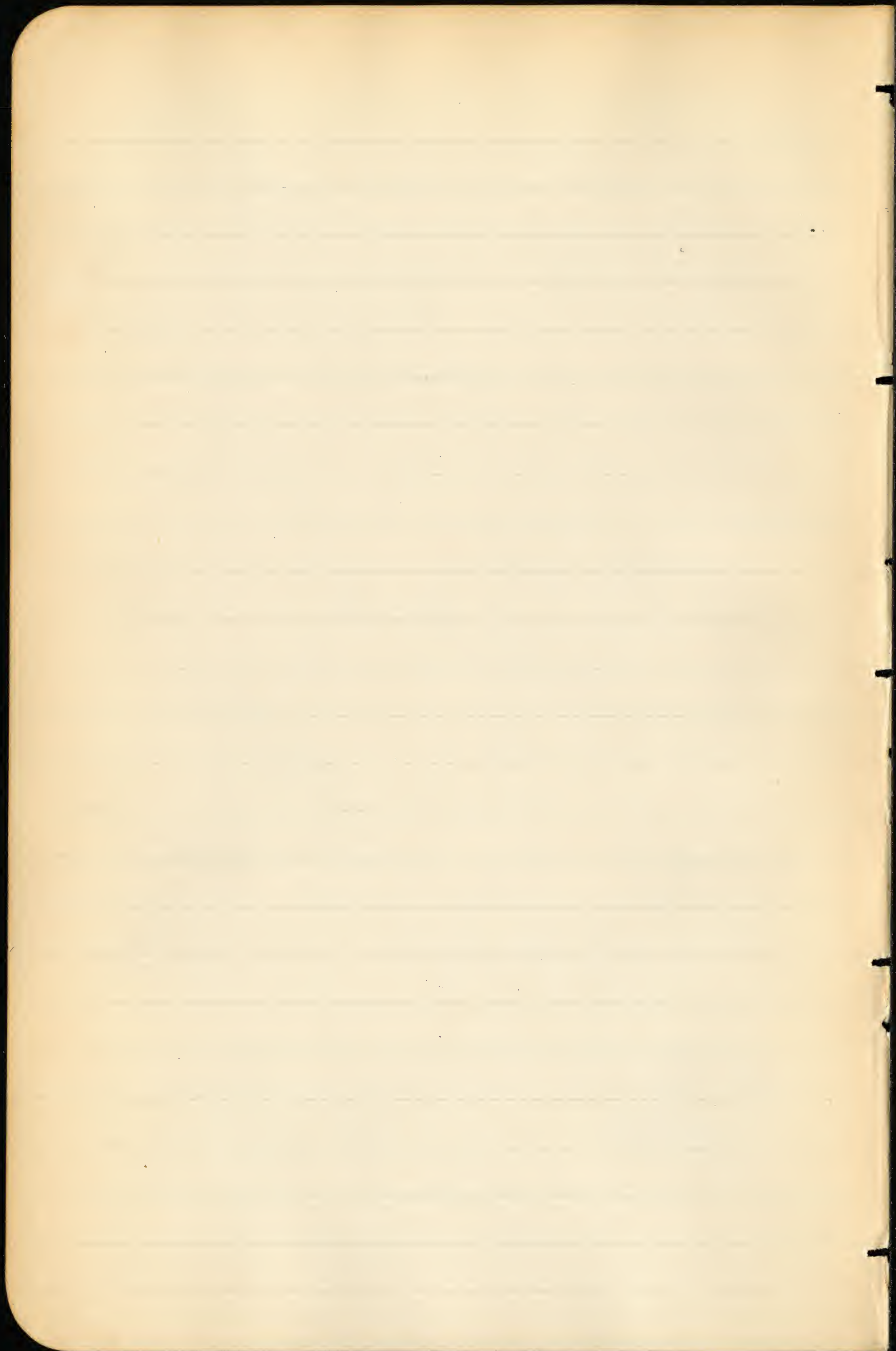
*Rubus lasiococcus*

.. *vitifolius*

*Acer circinnatum*

*Amelanchier alnifolia*







*Rhamnus purshiana*.

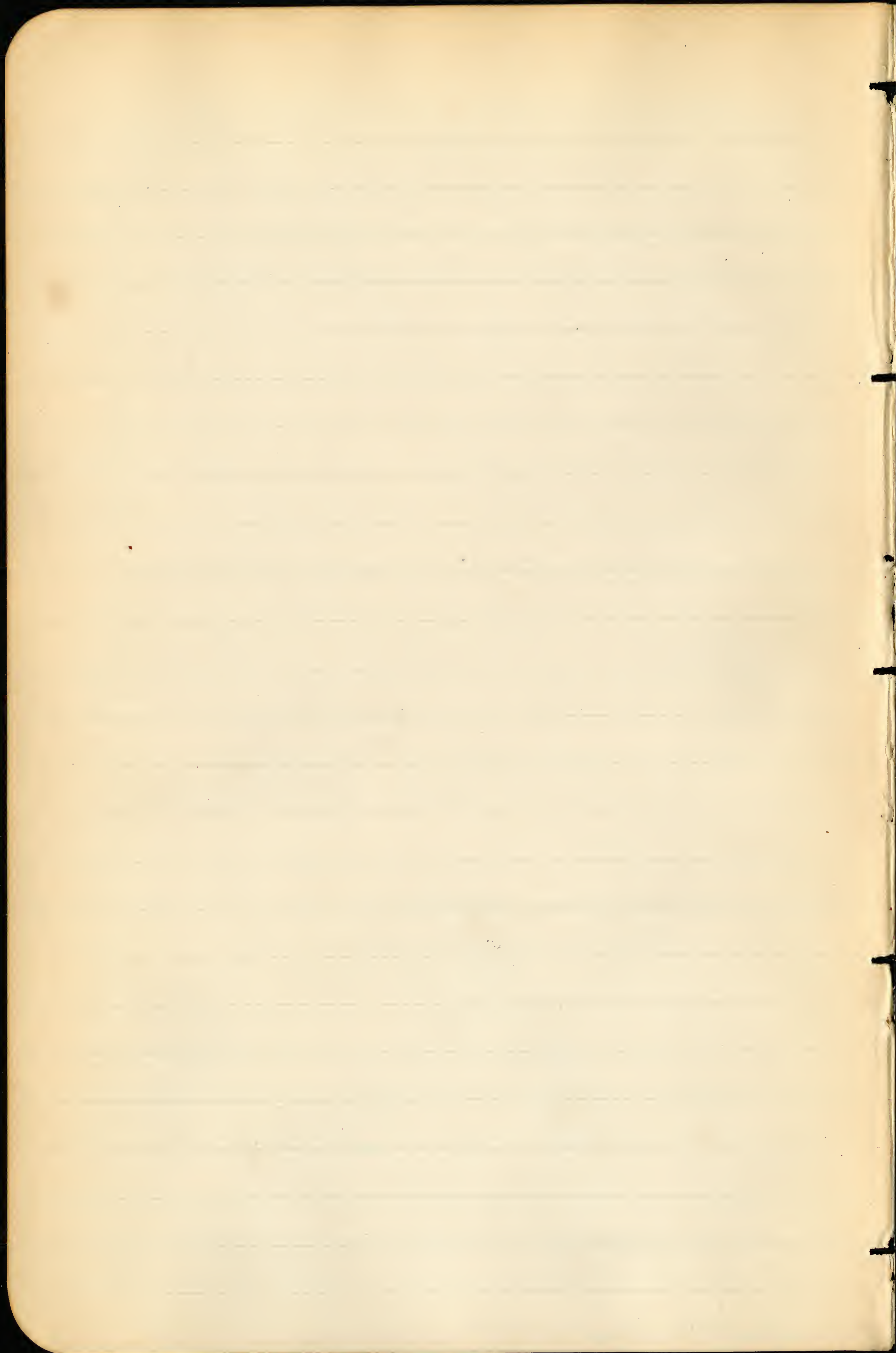
In Judge Waldor's buckberry patch, collected

*Vaccinium*

at Salem stopped at the Salem Hotel.

Left at night for Eugene.







July 28, 1895.

Eugene, Oregon.

Arrived late last night. Up to 3 P.M.  
engaged in buying a saddle horse and a  
packhorse.

The trees and shrubs seen in the vicinity  
of Eugene are as follows.

*Pseudotsuga mucronata*, commonest tree except

*Pinus ponderosa*, abundant in places <sup>of</sup> <sub>the</sub>

*Abies grandis*

*Quercus garryana*, most abundant tree

*Acer macrophyllum*

*Fraxinus viridis*,

*Populus trichocarpa*, along streams

*Crataegus douglasii* = *rivularis*

*Salix populifolia*, along streams, large tree

*Oemaronia cerasiformis*

*Spiraea douglasii*

*Rhus diversiloba*, abundant

*Prunus mollis*

*Acer circinatum*

*Philadelphus lewisii*

*Rosa prinosarpa*, abundant along roadsides.

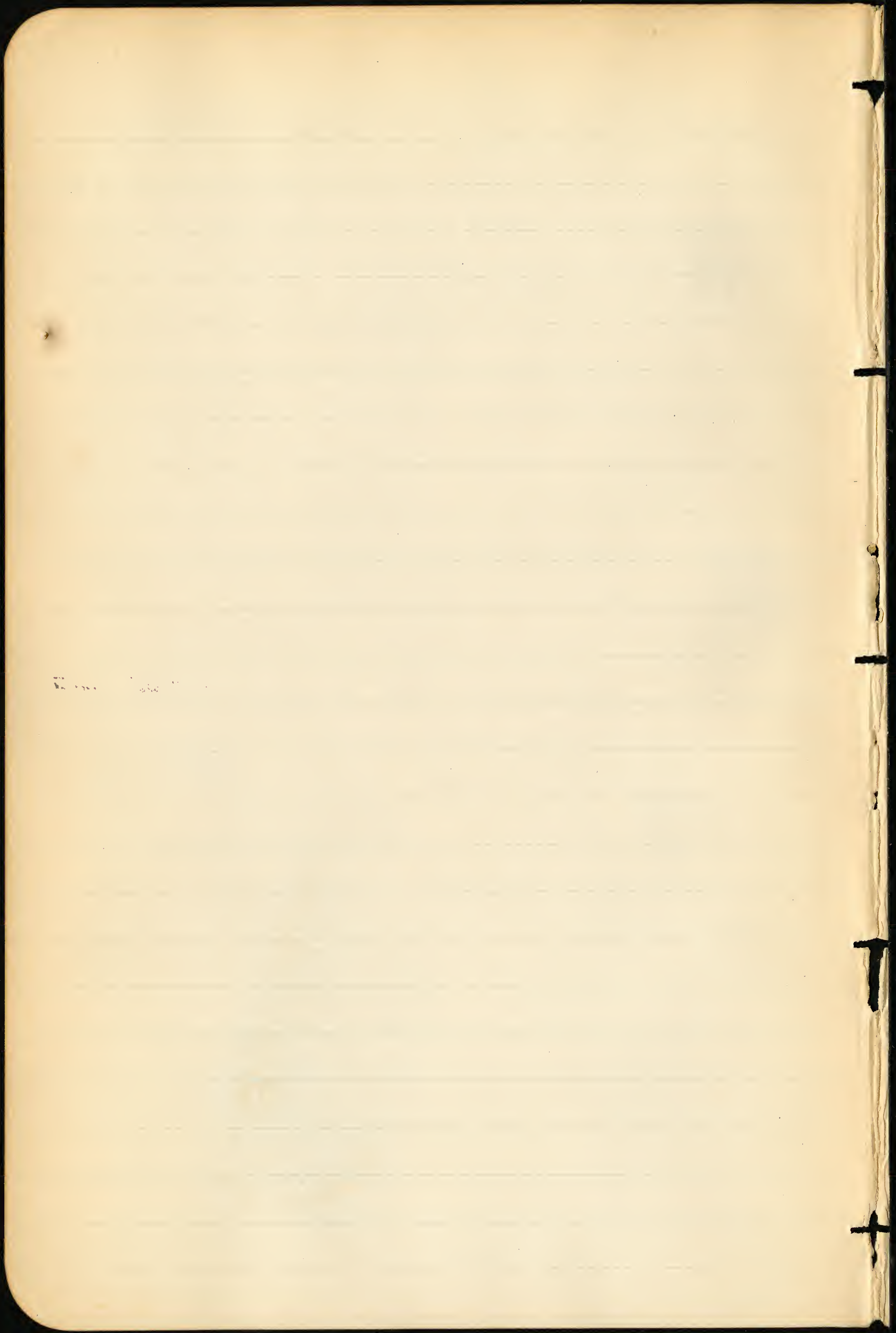
.. *macrocarpa*, ..

*Sambucus glauca*

*Berberis aquifolium*

*Rubus lasiococcus*







Many dead specimens of *Eriogonum pyrolae-  
folium*, their roots partially or wholly exposed.  
This on pumice drift slopes, showing un-  
usual surface erosion.

At least 1000 feet above the last trees,  
on an open southwest slope,  
the vegetation of the lower ~~pumice~~ lava  
drift slopes consisting of only

*Eriogonum pyrolae-  
folium*

*Juncus parryi*

*Spraguea umbellata*, ~~and an occasional~~  
~~tuft of flowerless grass~~, I found the first  
*Collomia debilis*, collected, and not found <sup>on</sup> ~~any~~ <sup>elsewhere</sup>

*Saxifraga tolmiei*, collected.

809

The plant growing next highest to the above  
five is

*Juncoides parviflorum*

The next are

*Lupinus minimus*

*Polygonum*

*Agoseris*

*Hieracium gracile*

*Fragaria*

*Poa*

*Carex spectabilis* Dewey

collected July 20  
to-day

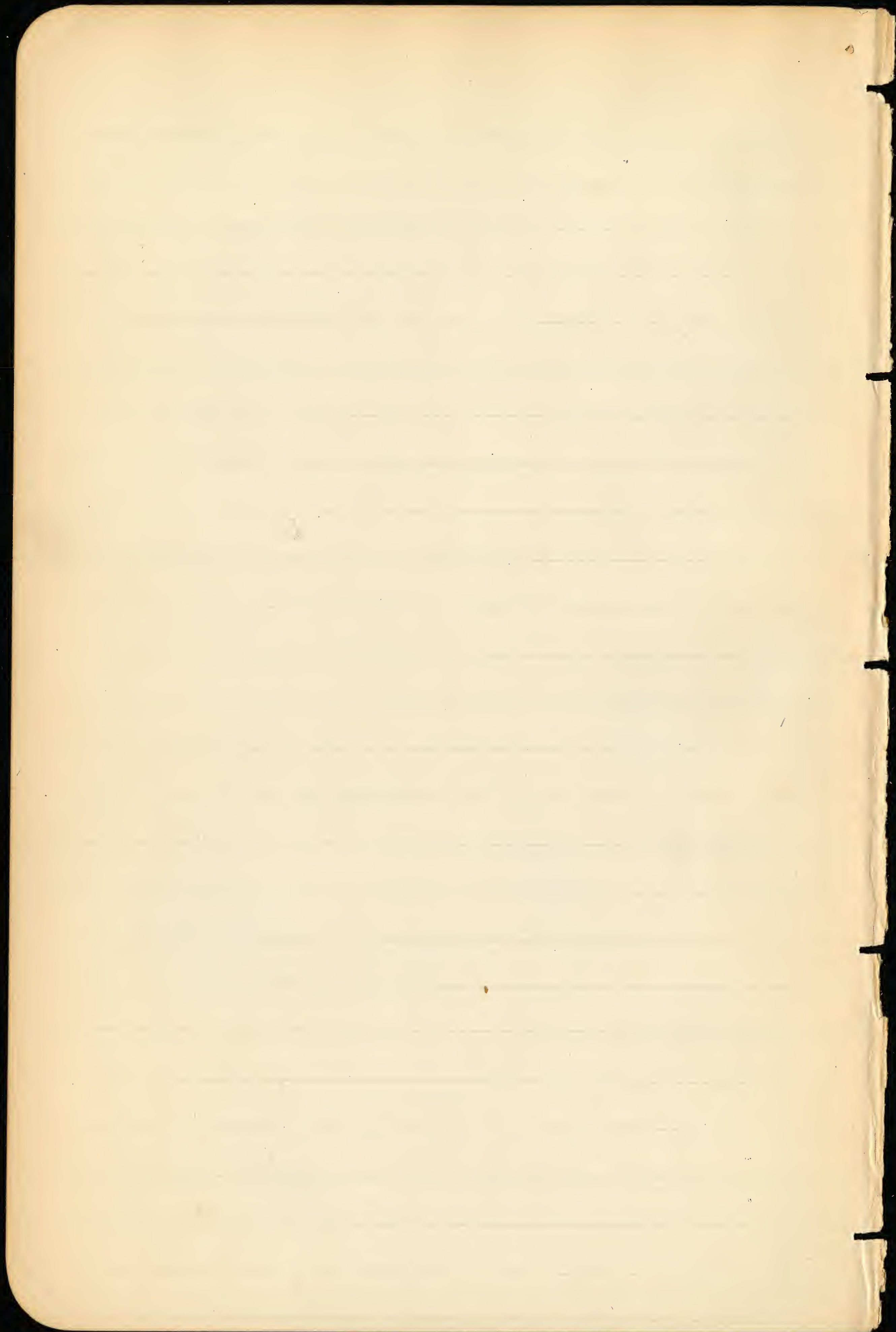
823

*Carex alpina*

*Pentstemon*

*menziesii*-like







*Rubus vitifolius*, probably.

*Holodiscus aricaefolius*

*Ceanothus sanguineus*

*Salix nuttallii*

*Corylus californica*, very common

*Ribes sanguineum*

*Rosa gymnocarpa*

*Rhamnus purshiana*

*Amelanchier alnifolia*

*Ribes atropes*

*Cornus sanguinea*?

*Salix velutina*

" *discoloroides*?, probably *S. nuttallii* & something else

*Symphoricarpos*

*Pyrus rivularis*

*Ceanothus cuneatus*



Amos D. Hyland, two dozen copies of the first notice



July 29, 1895.

Probably not 100 feet above Eugene. Lowell P.O. (Highlands), Oregon.

Set out for the mountains this morning.  
Stopped at Mr. Highlands, twenty miles.

Saw additional to trees and shrubs  
of yesterday

*Opulaster*

*Alnus oblongifolia*

*Prunus demissa*

*Lipocedrus decurrens*

at and near the cemetery at Pleasant Hill  
*Arbutus menziesii*

*Cytisus scoparius*, escaped from the cemetery.

At the Trent sawmills, four miles below Mr. Highlands  
*Ribes lobbiai*

At the crossing of the Willamette, about a  
mile below Mr. Highlands

*Thuja plicata*

*Cornus nuttallii*

*Taxus brevifolia*

*Alnus argentea*

*Gastrophysa polyphylla*, 4 in. x 12 ft.

*Saultheria shallon*

South slope of hills at Mr. Highlands partly  
bare, with scattered oaks and Douglas spruce,  
north slope densely wooded with conifers prin-  
cipally Douglas spruce.



The sleet brakes occur on old burns where the area has been again seeded to timber, mostly red fir, very closely. The trees may be 100 or even 200 feet high after <sup>10</sup>, 15 or 20 years. Areas of many acres, being very close, very slender, and very tall, after becoming weighted with snow and sleet in winter, begin to lean and finally with additional snow the whole mass goes down gradually. Make no loud noise. Common all about. Only on slopes, and always fall down hill, trees all killed.



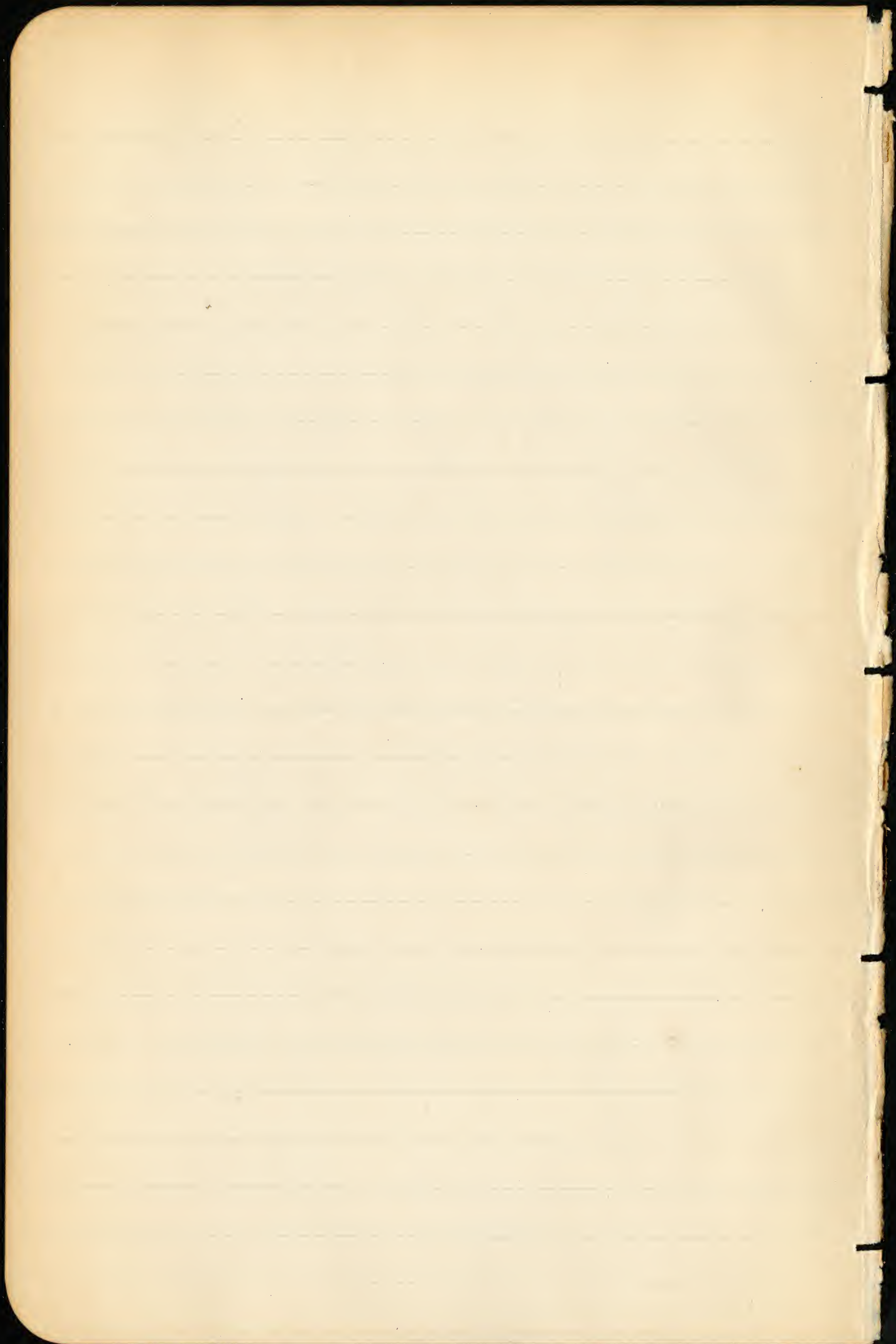
Detroit, Oregon, Aug. 26, 1898.

Came down to this place from Funt's Cove to-day passing Permelia Lake at 4100 feet and striking the Minto Trail at about 2500 ft.

~~Detroit~~ Near Gates, Oreg., Aug. 27, 1898.

Came down from Detroit to-day, and camped at Mr. Henness, about a mile from Gates. Expect to start for Portland by rail to-morrow.







July 30, 1898.

Hazeldell, Lane Co. Oregon  
Left Mr. <sup>elevation probably not over 1500 feet.</sup> Hylands in the morning and  
stopped for lunch at Blakeley's (now occupied by  
Mr. Wilhelm), 12 miles. In the afternoon  
went on to Hazeldell post-office, 14 miles further.  
Found the two Applegates there awaiting me.

In the forenoon saw the following trees  
and shrubs.

- ✓ *Pseudotsuga mucronata*
- ✓ *Thuja plicata*
- ✓ *Pinus ponderosa*, very little
- ✓ *Larodendron decurrens*
- ✓ *Acer macrophyllum*
- ✓ *Taxus brevifolia*
- ✓ *Praxinus argana*
- ✓ *Quercus garryana*
- ✓ *Arbutus menziesii*, 12 to 16 in. diam. <sup>uncommon</sup> 30 to 40 ft high not
- ✓ *Salix populifolia*, along the river only
- ✓ *Populus trichocarpa*, in the bottoms
- ✓ *Rhamnus purshiana*
- ✓ *Crataegus rivularis*
- ✓ *Abies grandis*
- ✓ *Prunus mollis*
- ✓ *Castanopsis chrysophylla*
- ✓ *Alnus argana*
- ✓ .. *oblongifolia*
- ✓ *Cornus nuttallii*
- ✓ *Salix nuttallii*
- ✓ *Sambucus glauca*



*Cytisus scoparius*, escaped

✓ *Ribes lobbi*

✓ *Gaultheria shallon*, abundant.

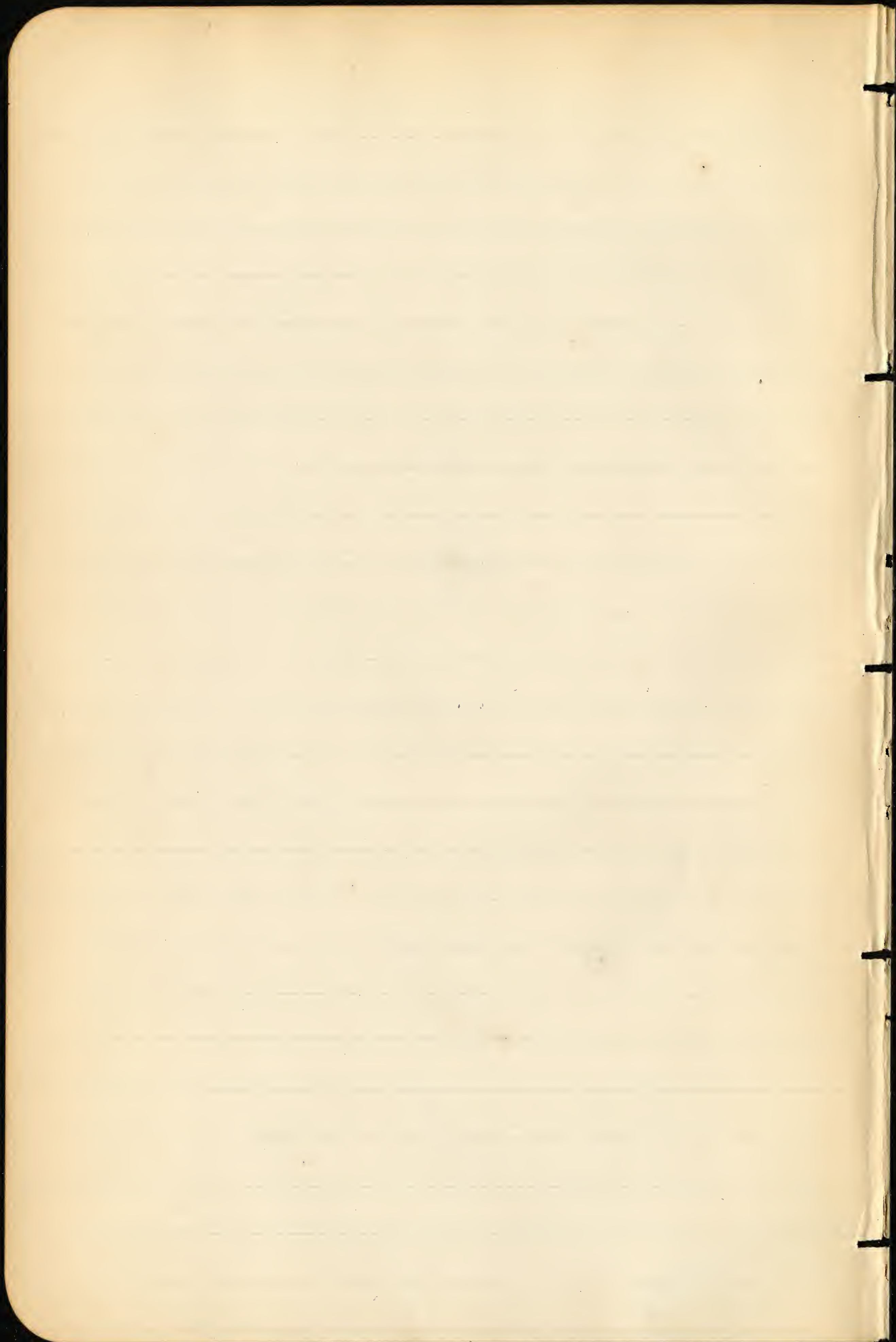
✓ *Lonicera rosea*

.. *hispida*



- ✓ *Osmaronia cerasiformis*
- ✓ *Rhus diversiloba*, 30 to 50 ft high on *Pseudotsuga*
- ✓ *Acer circinnatum*
- ✓ *Philadelphus lewisii*
- Rosa macrocarpa*
- ✓     " *gymnocarpa*
- ✓ *Berberis aquifolium*
- ✓ *Rubus lasiococcus*
- ✓     " *vitifolius*
- ✓ *Holodiscus ariaefolius*
- Ceanothus sanguineus*
- ✓     " *integerrimus*
- ✓ *Vaccinium parvifolium*
- ✓ *Rubus parviflorus*
- ✓     " *sempervirens*, <sup>Just beginning to fruit</sup> escaped from cultivation
- Robinia pseudacacia*, one tree by the roadside, <sup>Escaped.</sup>
- ✓ *Tsuga heterophylla*, occasional
- ✓ *Ceanothus velutinus*
- ✓ *Corylus californica*, the most abundant underbrush
- ✓ *Ribes sanguineum*
- ✓ *Amelanchier alnifolia*
- Ribes atripes*
- ✓ *Salix velutinus*
- ✓ *Symphoricarpos*  
    ~~decolor~~
- ✓ *Opulaster*







July 31, 1895.

Hazeldell, Lane Co., Oregon.

Stayed in camp in the morning. Went down to Mr. McClane's in the afternoon.

Aug. 1, 1895

High Prairie camp.

Went from Hazeldell up to Kiteon Spring in the forenoon, 6 miles and return.

In the afternoon broke camp and started for Grasshopper Mountain, camping at the east end of High Prairie, 8 miles.

Elevation of High Prairie about 2500 feet

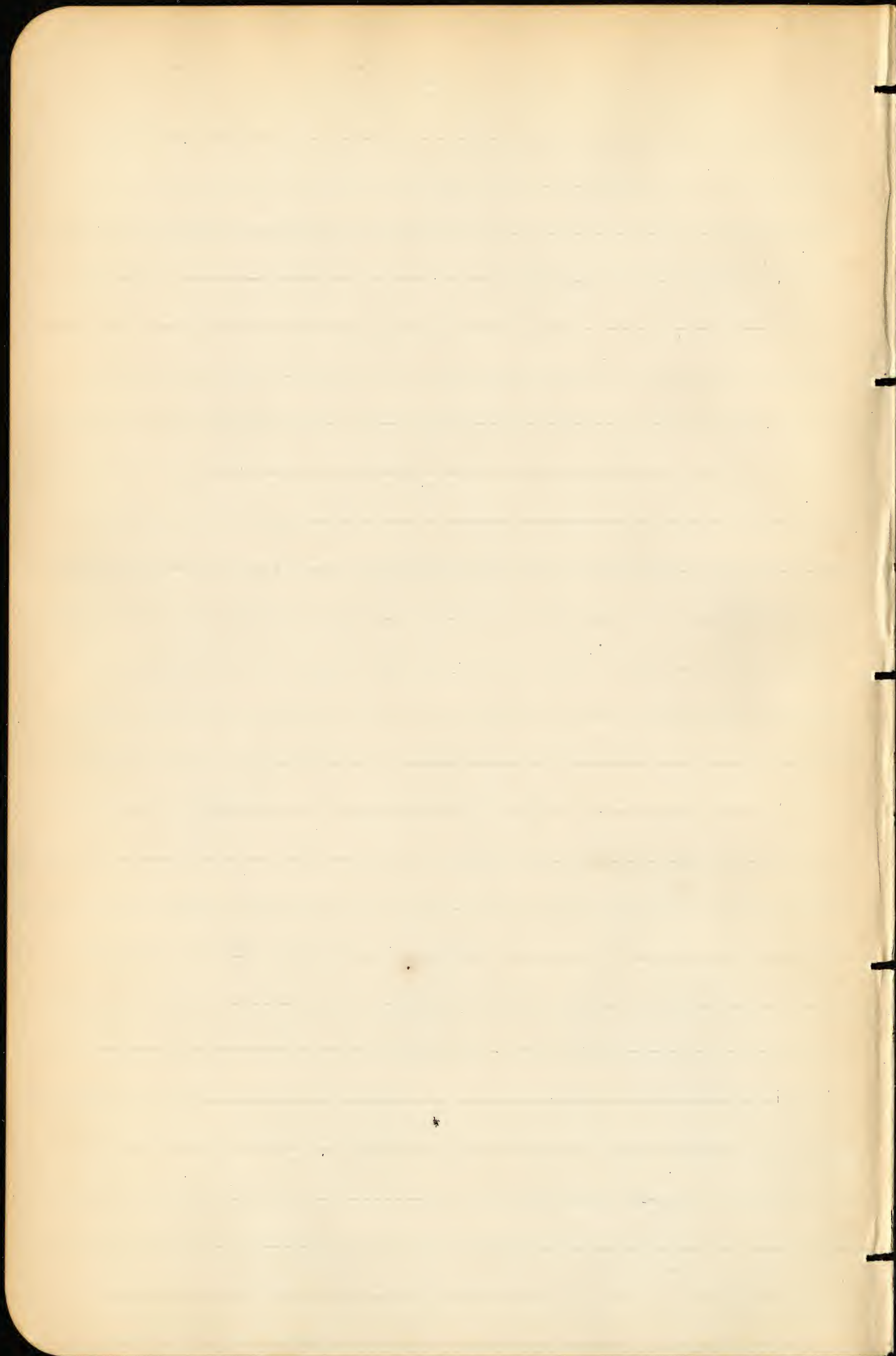
~~Lowell Camp~~ Brocks Meadow. August 2, 1895.

Went from High Prairie over into the North Fork (of the Middle Fork of the Willamette) valley and camped at Lowell Camp, foot of Grasshopper Mountain. Varied in elevation from about 2500 feet at High Prairie to 3000 feet at the Divide, and 2500 feet at Lowell Camp. Traveled about 18 miles.

~~Lowell Camp~~ Brocks Meadow, Aug. 3, 1895.

Went up Grasshopper Mountain and return, about 8 miles. First treeless ridge 3500 ft, lower edge of the bald 4500 feet, summit of the bald 5500 ft.







Aug. 4, 1898.  
~~Brook Meadows~~  
~~Lowell Camp~~ (by proxy).

Traveled about 8 miles up the North Fork bottom and return, reaching an elevation of about 2800 feet. I myself stayed all night at a deer lick.

Grasshopper Mountain, Aug. 5.

Came up from camp to the mountain this morning, about 3 miles. Made a trip on foot over the east to the north slope.

Camp two miles west of Injun Meadows, August 6.  
Came over from Grasshopper Mountain to-day, about 12 miles. Day between Grasshopper Mountain  
Bop Canyon <sup>3800</sup> feet. Chocksey Mountain <sup>4000</sup> feet. Chock-  
~~sey~~ ~~Swamp~~ <sup>Swamp</sup> 3800 feet. Injun Meadows 4800  
feet.

Moved over to this place and Injun Meadows, August 7.  
Stayed near camp all day, botanizing and writing up notes.



J. C. Brattain



Brock Meadow, August 8, 1898.

Reached this place from Durin Meadows to-day, about 17 miles.

High Prairie, August 9, 1898.

Reached this place from Brock Meadow to-day, about 18 miles.

Lowell (Hylands) August 10, 1898.

Reached this place from High Prairie to-day, about 30 miles.

Springfield, August 11, 1898.

Reached this place from Lowell to-day, about 15 miles, and camped at Mr. Bratton's farm, about half a mile east of the city.

Springfield, August 12, 1898.

Spent the day purchasing horses.

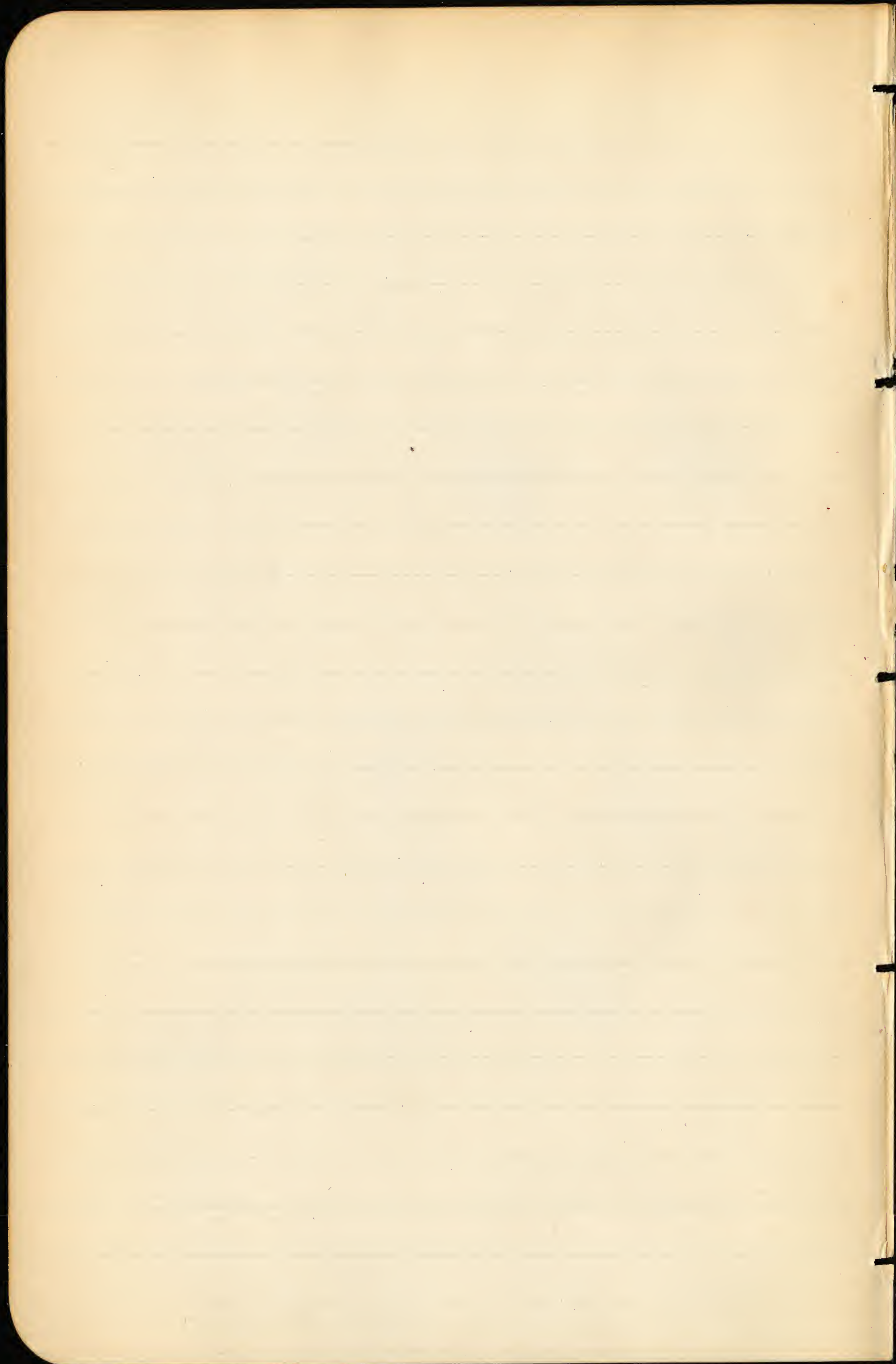
Springfield, August 13, 1898.

Spent the day completing preparations for our start.

Anderson Station, Oreg. August 14, 1898.

Left Springfield at 2 P. M. and came to this point, 16 miles.







Wychoff Station, Aug. 15, 1895.

Reached this point from Anderson Station to-day, 20 miles.

Foley Springs, Aug. 16, 1895.

Came from Wychoff Station to-day, about 20 miles.

Foley Springs <sup>Oreg</sup> Aug. 17, 1895.

Ascended the mountain back of Foley Springs, following the ridge east of the trail on the way up, the trail coming down. Foley Springs 1600 feet. Change from Douglas spruce to black hemlock 4000 to 4500 feet. Summit of mountain (Horse Pasture) 5500 ft.

Lost River Station (Ward's ranch) Oreg. Aug. 18, 1895.

Came up from Foley Springs in the afternoon, about 14 miles. Met Mr. A. S. Powers of McKenzie Bridge. Lost River Station about 2500 ft.

Cold Spring, Crook Co. Oreg, Aug. 19, 1895.

Reached here from Lost River Station to-day, 27 miles. Black hemlocks <sup>4000 to</sup> 4500; shoulder of summit 4700; summit 5000. Cold Spring 3400.



In Clear Lake trees measured respectively 35 feet, the top ending 6 ft. below the surface; and 34 feet, the top ending  $1\frac{1}{2}$  feet below the surface. Stumps on the sand beach measured 18 inches, with 130 annual rings; and  $27\frac{1}{2}$  inches, with 243 rings. No erect stumps above surface. Besides plants collected and noted ~~in~~ sheets, Spirogyra formed bright green mats in smaller or larger areas on the bottom.



Graham's ranch

Aug. 20, 1898.

Went from Cold Spring to Sisters P.O., and then up to Graham's, about 11 miles.

Fish Lake

August 21, 1898.

Came over from Graham's to Fish Lake, 24 miles, lunching at Big Lake. Graham's 3400 feet. Pinus murrayana coming in at 3800, black hemlock and blue fir at 4200. Summit about 4500. Beginning of solid Pseudotsuga on west slope 4000. Yellow pines occasional at 3700. Fish Lake 3400.

August 22, 1898

Hensley Meadows,

In the morning went to Clear Lake  $2\frac{1}{2}$  miles, and return.

In the afternoon went from Fish Lake to this point, accompanied by Mr. E. Hennes, Bates, Oreg. Distance in afternoon 12 miles. At 3800 feet passed through a dry area covered by Pinus murrayana, but at the same elevation struck into the magnificent heavy forest again.

Elevation of Hensley Meadows 3700.



The Metolias Trail, an old trail, originally an Indian trail, connecting the Indian settlements on the Warm Springs Indian Reservation with the Winto Trail at a point near the west end of Marion Lake. It is now partly blazed, <sup>and is considerably used by sheepmen and others</sup> <sup>in addition to the Indians</sup> ~~the~~ trail ~~crosses~~ the Cascade divide about five miles south of Mount Jefferson, at an elevation of about 6000 feet.



Ann Lake

Aug. 23.

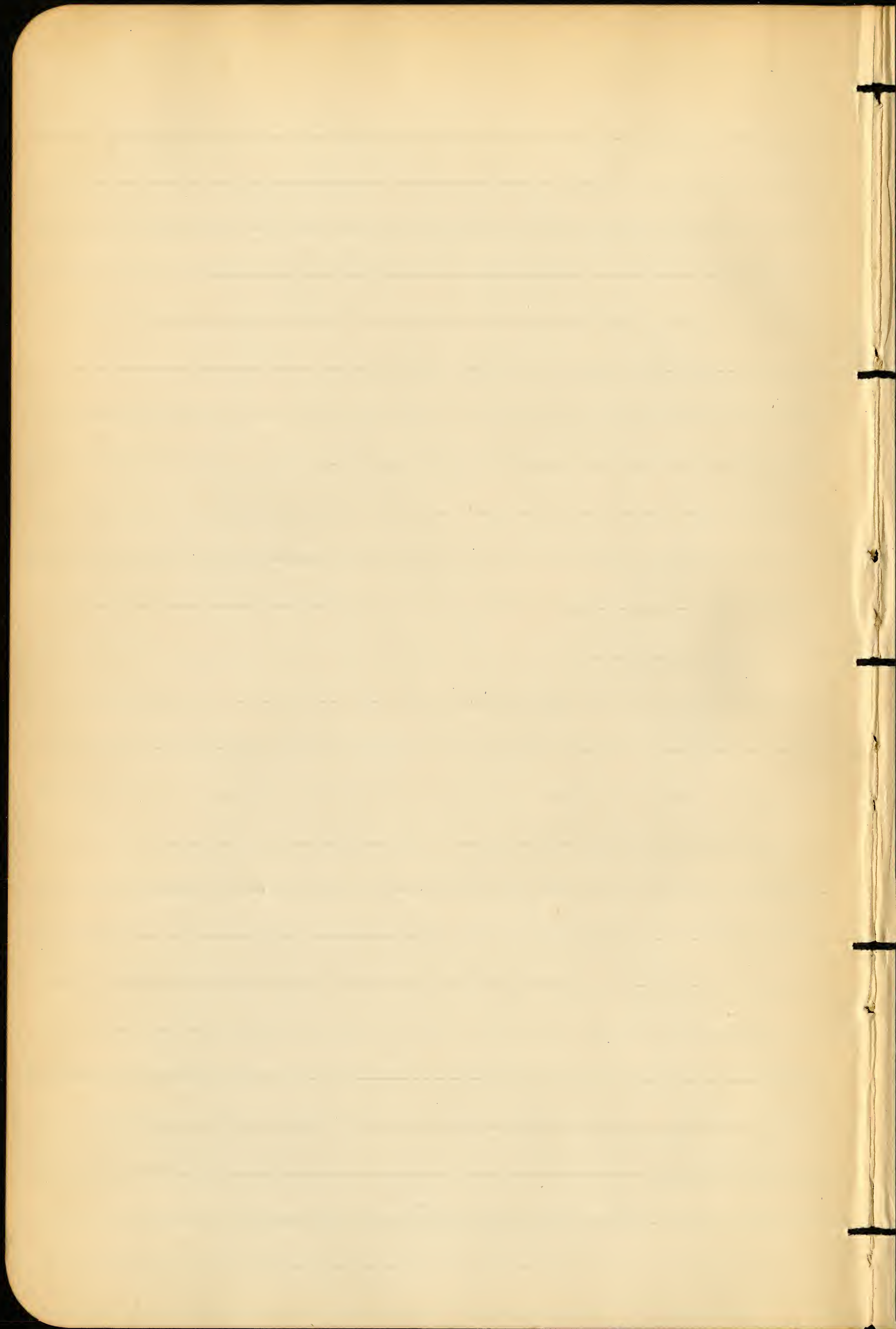
Came through the woods without trail from Hensley Meadows and struck the Minto Trail on the south margin of the Lake. Distance about 12 miles. Most of the journey through lodgepole pine mixed with black hemlock and silver pine. Elevation of Ann Lake 7100 feet.

Point on Metolias Trail, about 1/2 mile west of summit, Aug 24, 1898.

In the forenoon started out eastward on the Minto Trail and just before reaching Marion Lake took the left hand trail. Up to 5500 ft, Pinus murrayana with Tsuga mertensiana, Pinus monticola, Abies lasiocarpa, and A. amabilis, with occasional A. nobilis, and Pinus albicaulis. Above on sheltered west slopes, where snow was evidently heavy, P. murrayana disappeared, and Tsuga mertensiana became more abundant. At our nooning-place, 5800 ft., the forest consisted of black hemlock with considerable Abies amabilis, with an underbrush of Vaccinium cespitosum, Cassiope, Phyllodoce empetrifolia, Sorbus parvifolia, Vaccinium membranaceum, and a great abundance of Luethera.

In the afternoon looked over the country to the







north along the Cascade divide as far as Hunt's Cove and return, on foot. About 6 miles by horse

Hunt's Cove, Marion County, Oreg., Aug. 25, 1898.

Came over to this point, about 4 miles, to-day, and camped at the uppermost meadow watered by springs. Examined the lateral divides to the westward, overlooking Bingham Basin and Grizzly Basin, Minto Mountain lying between. The timber on all these divides is badly burned, probably three-fourths being gone.

Hunt's Cove, August 26, 1898.

Made the ascent of Mount Jefferson to-day. Elevation of camp 5500 ft. The timber up the lower slopes of Mount Jefferson consists chiefly of Tsuga mertensiana, with some Abies amabilis, and an occasional Abies lasiocarpa. At 7000 feet Tsuga mertensiana ceased, the remaining trees being Pinus albicaulis and Abies lasiocarpa.

The plants above this point were.

Juncus mana

Lupinus

Polygonum newberryi?

Pencedanum martindalei

Luetha pectinata.



Above timberline occurred those marked with a  
✓ (list incomplete).

Above 9000 feet occurred

*Hulsea nana*

*Saxifraga tolmiei*

*Oxyria digyna*

Summit of the mountain below the ~~sap~~ rock, which  
was not climbed 10200 feet.



*Eriogonum pyrulaefolium*

*Sitanion sitanion*

*Phyllodoce empetrifolia*

.. *glanduliflora*.

*Antennaria*

*Poa*

*Juncoides glabrata*

*Vaccinium scoparium*

✓ *Pentstemon davidsonii*.

*Carex tenuispicata*

✓ *Carex breweri*.

✓ *Saxifraga tolmiei*

✓ *Hulsea*

✓ *Oxyria digyna*.

*Trisetum*

*Cardamine pachyphylla*.

*Eriogonum*, small, shrubby, yellow.

*Juncus parryi*.

*Aster* (prostratus)

*Vaccinium (caespitosum)*

*Juncoides parviflorum*

*Spraguea umbellata*

*Hieracium gracile*

*Juncus subtriflorus*

Timberline was at 8100 feet, the trees consisting of *Pinus albicaulis*.



Hunter in Hunter Cove, D. W. Shafer, Sisters, Ore.



Kent Lumber Manufacturing Company. Handle mostly "fir" (Douglas spruce), <sup>some</sup> "red cedar" (*Thuja plicata*), "white cedar" (*Larix laricina*), oak, maple, ash; no yellow pine, dogwood, nor alder.

Mill capacity 20,000 per day; yearly cut about 2,000,000 ft. board.

First cause of fire is carelessness of campers, including travelers and hunters. From "slashing brush", in making clearings.

"Sheet breaks" of the "fir" trees. ~~Often~~ <sup>Sometimes</sup> burned for clearings. Make "awfullest" fires. Trees 200 ft. high, many acres go down.

Lumbering operations. Brush accidentally fired after timber is cut.

Fires chiefly on south sides of hills. Indians fired the foot-hills up to the year

. The fire burned chiefly the south slopes and kept the timber back. Now coming in thick, mostly "red fir", a little white fir, some a hundred feet high.



Elmer I. Applegate.  
Fred L. Applegate.

In the afternoon saw those checked thus ✓,  
with the following additional

*Arctostaphylos*, one at Hazeldell <sup>covered</sup> bridge

*Rhododendron californicum*

*Ribes menziesii*

*Ceanothus cuneatus*, one shrub seen.

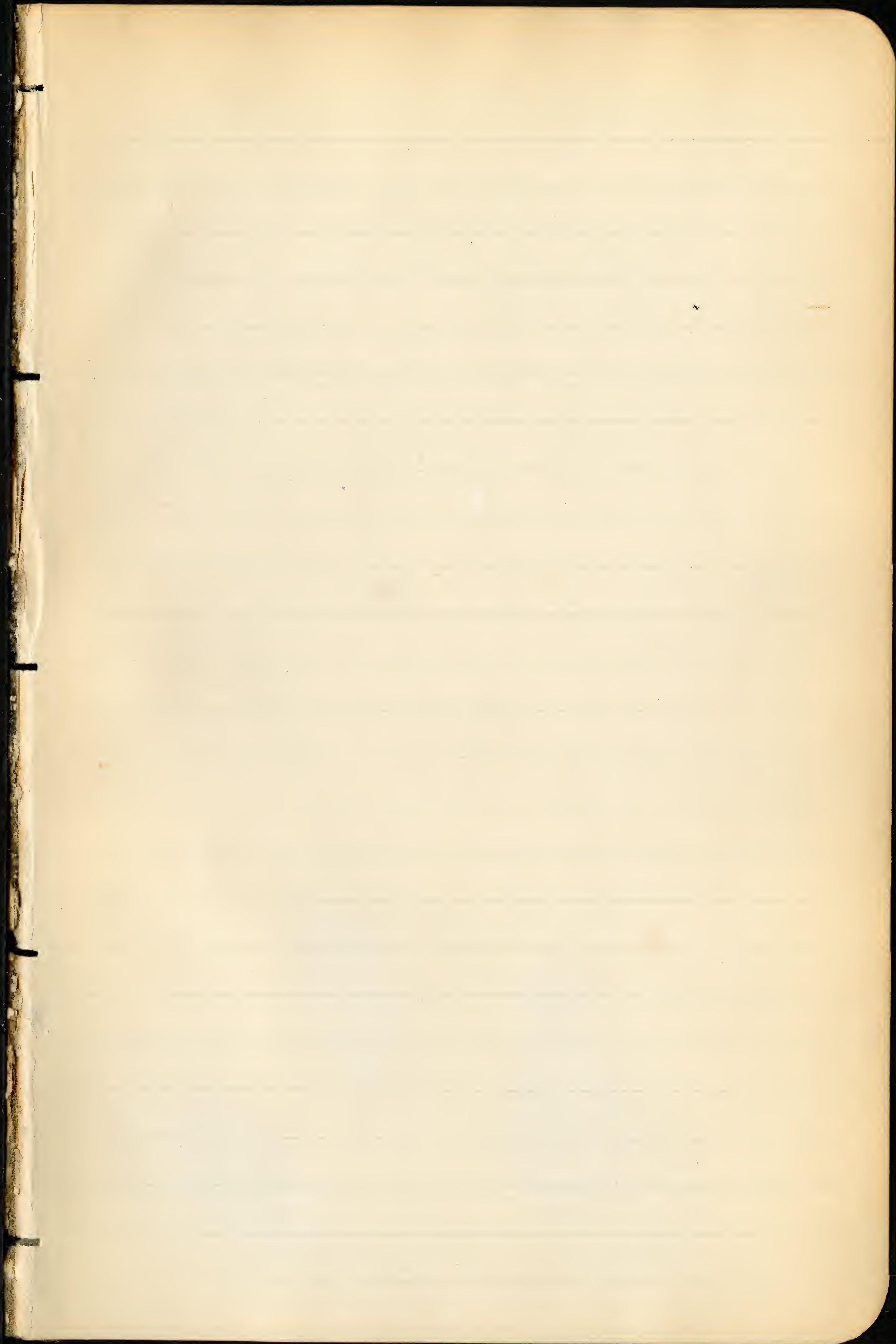
*Spiraea douglasii*

*Salix discoloroides*, as at Lake Merrill

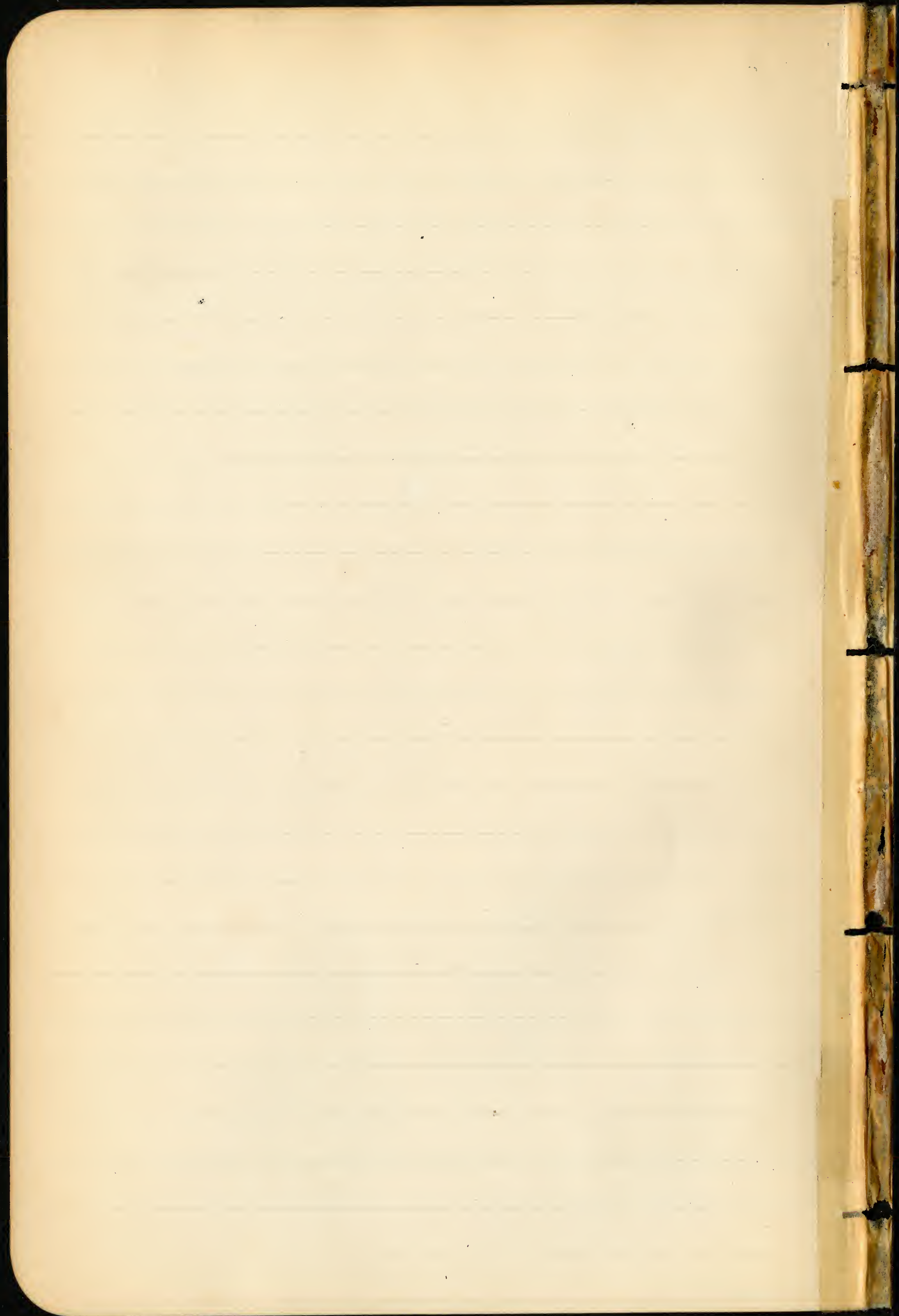
*Pinus ponderosa* was found only in the vicinity  
of Hazeldell, with great quantities of *Juniperus garyana*,  
on and about the bald south slopes.

*Pachystima myrsinites* was probably seen in one place











Hood River, Sept. 5, 1895.

Came up from Portland by rail to-day, arriving about eleven o'clock. In the afternoon took a short tramp near town with the Hon. E. L. Smith. Along the river bottoms are

*Populus trichocarpa*

*Crataegus douglasii*.

*Salix populifolia*

*Pseudotsuga mucronata*.

*Salix fluviatilis*

*Fraxinus viridis*

On the slopes, which are partly open, are

*Quercus garryana*

*Prunus ponderosa*

*Salix nuttallii*

*Rhus diversiloba*

*Kunzia tridentata*.

*Amelanchier alnifolia*

*Philadelphus lewisii*

*Symphoricarpos*

*Corylus californica*

*Rosa*

*Berberis aquifolium*.

*Holodiscus arborescens*.

*Rubus vitifolius*.

*Prunus mollis*, as well as

*Crataegus douglasii*.



Above the black hemlock <sup>and blue fir</sup> timber on Mount Hood found the following:

a.t. = above timber-line

*Pinus albicaulis*  
*Juniperus nana*  
*Penstemon nuttallii*  
*Encelthus*  
*Polemonium*  
*Polygonum davisianum*  
*Eriogonum umbellatum* a.t.  
*Senecio triangularis*  
*Chrysothamnus bloomeri*  
*Phlox douglasii*  
*Trisetum subspicatum*  
*Carex breweri*  
*alpina*  
*Achillea millefolium* a.t.  
*Lonicera involucrata*  
*Spiraea umbellata* a.t.  
*Poa*  
*Phacelia* a.t.  
*Pentstemon davidsonii* a.t.  
*Sitanion* a.t.

*Sorbus occidentalis*  
*subtriflorus*  
*metensis*  
*Mimulus lewisii*  
*Solidago*  
*Lupinus lyallii* a.t.  
*Artemisia*  
*Aster procumbens*  
*Silene* a.t.  
*Carex missillata*  
*Festuca* a.t.  
*Saxifraga tolmieri* a.t.

In the upper edge of *Pinus albicaulis* on the southeast slope were  
*Juniperus parryi*  
*Colochortus nana*  
*Antennaria alpina*  
*Agrostis*  
*Carex oregonica*



Cloud Cap Inn, Oregon Sept. 6, 1898.

Camp up from Hood River to-day with Miss Florence Merriam and Mr. A. J. Johnson.

Country badly burned, one fire now burning east of the East Fork.

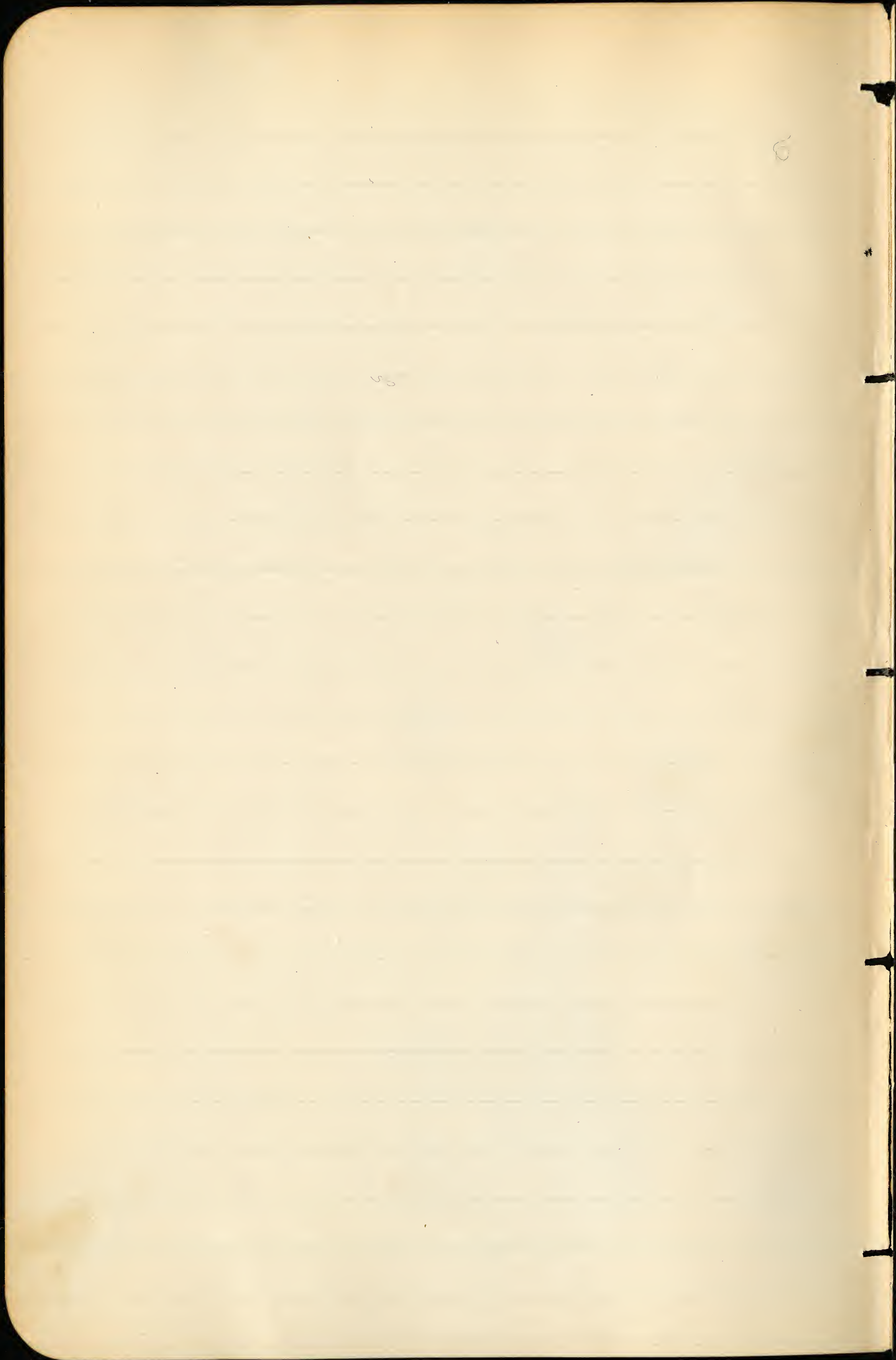
At about 4000 feet Douglas fir forest changed to *Pinus murrayana*, ~~which~~ with a mixture, varying in abundance, of *Abies concolor*, *Abies amabilis*, *Tsuga* ~~fi~~ *mertensiana* and other trees mentioned in notes. At about 5500 forest changed to a growth of principally black hemlock, and at about 6000? to a growth principally of white-barked pine.

White River bottom, Oregon, Sept. 7, 1898.

With Douglas Langille climbed the Cooper Spur of Mount Hood, crossed the East Fork glacier, descended the ridge between the waters of Hood River and White River, descended the Hood River side of the forested divide between the two rivers, crossed over this divide to the sandy bottom of ~~White River~~ and ~~then~~ traveled down the bottom to a forest fire about a mile below the point where the river turns to the south. Here we camped in the woods, surrounded by the forest fire.

Readings	
Cloud Cap Inn	6000
Timberline N.E.	7100
" S.E.	7350
Camp.	4000







Government Camp, Mt. Hood, Oreg., Sept. 8, 1898.

Came up White River bottom on the old Indian trail, crossed the ridge between White River and Salmon River at about timber line, descended the road to Summit Prairie, and then went ~~back~~ over the old Barlow Road to Government Camp.

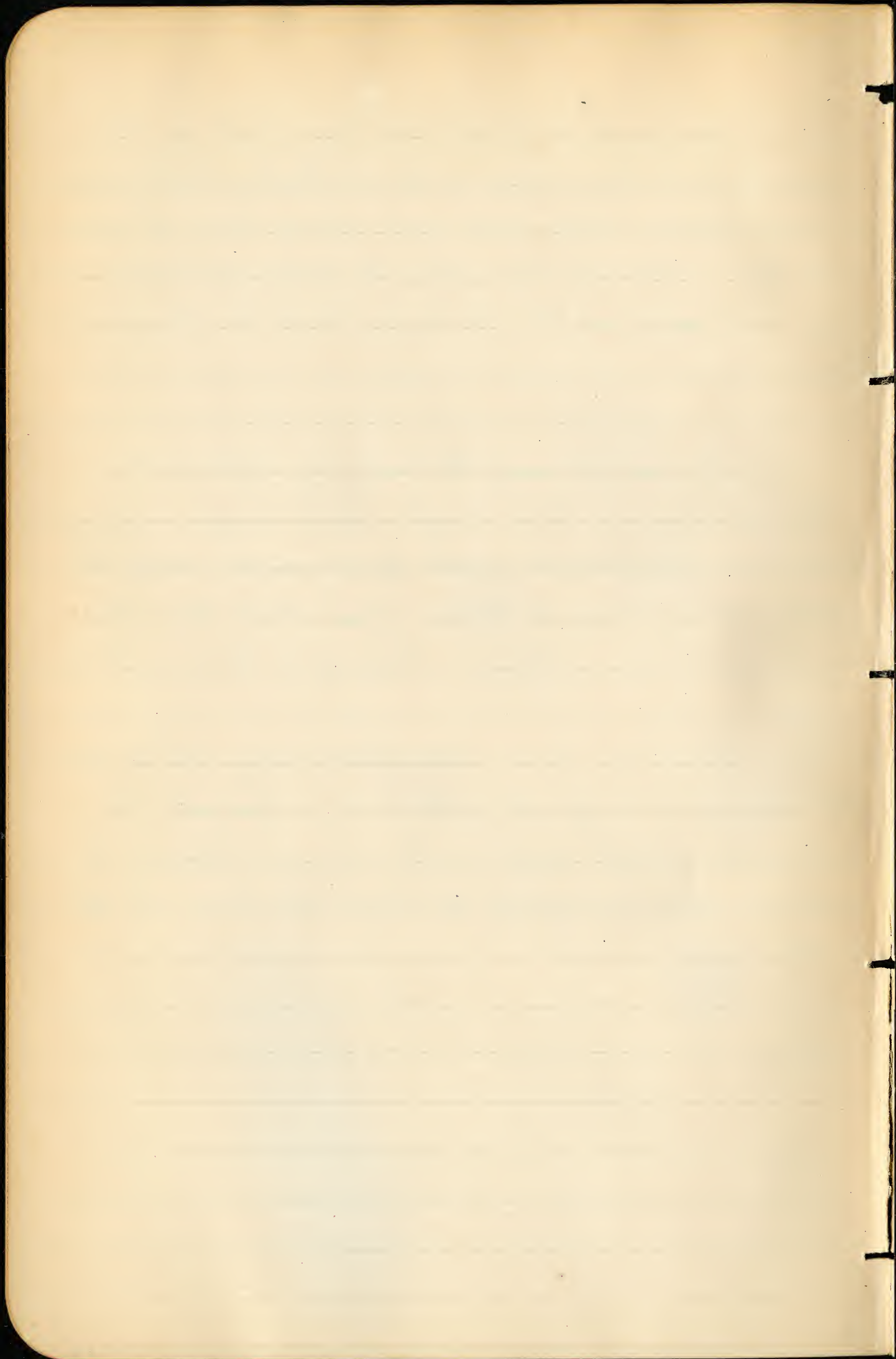
Government Camp, Mt. Hood, Oreg., Sept. 9, 1898.

On invitation of C. W. Haight, forest ranger, accompanied him and F. H. Wakefield, another forest ranger, both of The Dalles, to a fire near the Barlow road about two or three miles east of Summit Prairie. Returned to Government Camp.

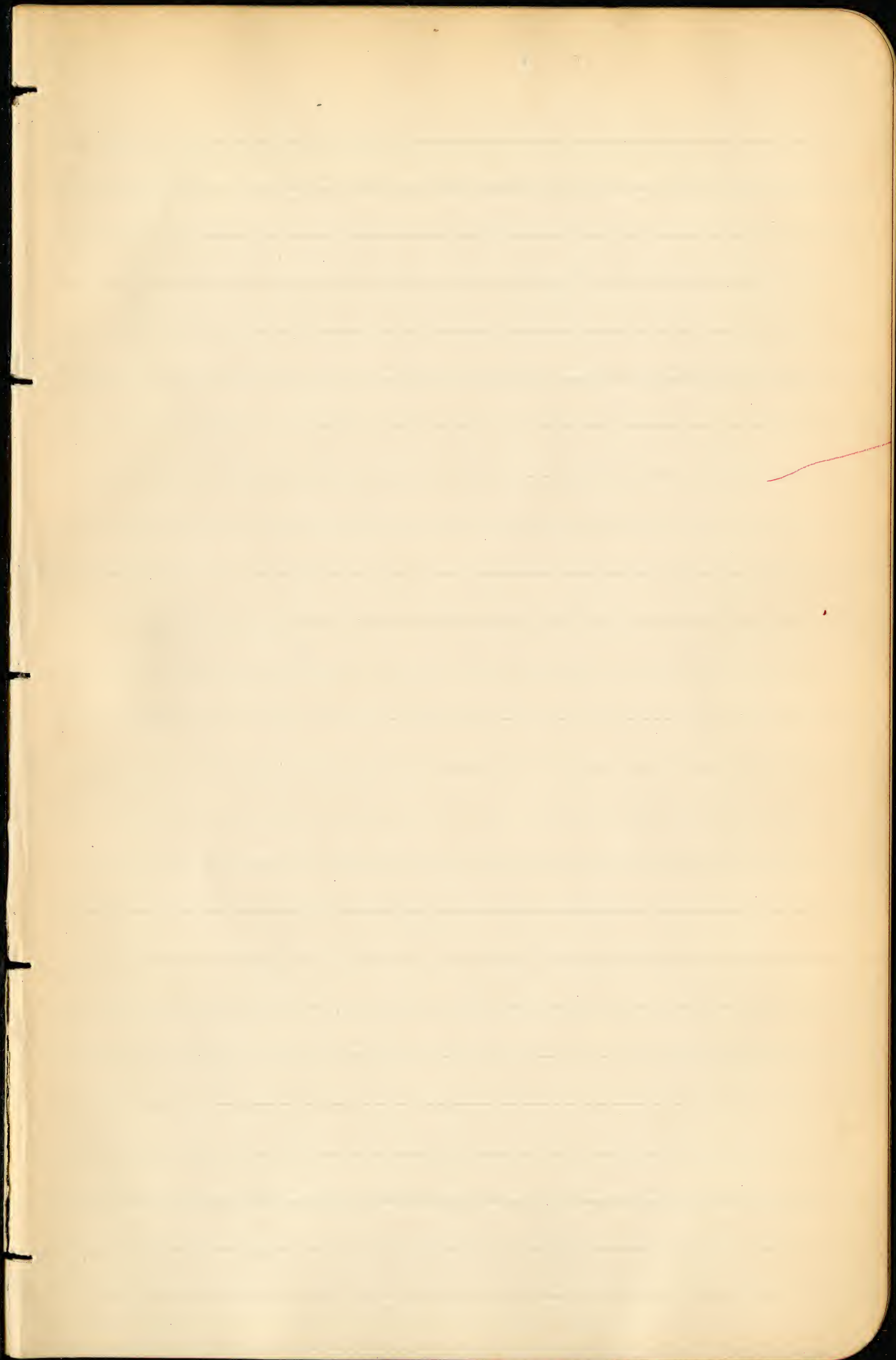
Cloud Cap Inn, Mount Hood, Oreg., Sept. 10, 1898.

Left Government Camp at 6:30 A.M., ascended the south<sup>west</sup> slope of Mt. Hood and came down the northeast slope, arriving at Cloud Cap Inn at ~~2:30~~ 2:50.











Trees and shrubs.

<i>Abies amabilis</i>	<i>Betula glandulosa</i>
.. <i>concolor</i>	.. <i>occidentalis</i>
.. <i>grandis</i>	<i>Castanopsis chrysophylla</i>
.. <i>lasiocarpa</i>	<i>Ceanothus cuneatus</i>
.. <i>lineata</i>	.. <i>cordulatus</i>
.. <i>mobilis</i>	.. <i>integerrimus</i>
.. <i>shastensis</i>	.. <i>frustratus</i>
<i>Acer circinatum</i>	.. <i>sanguineus</i>
.. <i>glabrum</i>	.. <i>velutinus</i>
.. <i>macrophyllum</i>	<i>Celtis</i>
<i>Alnus oblongifolia</i>	<i>Cercocarpus betuloides</i>
.. <i>organa</i>	.. <i>ledifolius</i>
.. <i>sinuata</i>	<i>Chamaecyparis nothkatensis</i>
.. <i>terrestris</i>	<i>Chrysothamnus albicaulis</i>
<i>Amelanchier alnifolia</i>	.. <i>bloomeri</i>
.. <i>pallida</i>	.. <i>humilis</i>
<i>Arctostaphylos arborescens</i>	.. <i>douglasii</i>
.. <i>nevadensis</i>	<i>Cornus nuttallii</i>
.. <i>pallida</i>	.. <i>pubescens</i>
.. <i>fruticosa</i>	.. <i>sanguineus</i>
.. <i>uva-ursi</i>	<i>Corylus californica</i>
<i>Arbutus menziesii</i>	<i>Crataegus</i>
<i>Artemisia arbuscula</i>	..
.. <i>cana</i>	<i>Cytisus scoparius</i>
.. <i>tridentata</i>	<i>Echinopanax horridum</i>
<i>Berberis aquifolium</i>	<i>Eriodictyon californicum</i>
.. <i>nervosa</i>	



<i>Eriogonum stellatum</i>	<i>Phoradendron</i>
.. <i>umbellatum</i>	<i>Phyllodoce empetrifolia</i>
<i>Fraxinus viridis</i>	.. <i>glanduliflora</i>
<i>Garrya fremontii</i>	<i>Picea engelmannii</i>
<i>Gaultheria myrsinites</i>	<i>Pinus albicanlis</i>
.. <i>ovatifolia</i>	.. <i>attenuata</i>
.. <i>shallon</i>	.. <i>lambertiana</i>
<i>Holodiscus aricaefolius</i>	.. <i>monticola</i>
.. <i>discolor</i>	.. <i>murrayana</i>
<i>Junciflorus rana</i>	.. <i>ponderosa</i>
.. <i>occidentalis</i>	<i>Polygonum shastense</i>
<i>Kalmia glauca</i>	<i>Populus tremuloides</i>
<i>Kunzia tridentata</i>	.. <i>trichocarpa</i>
<i>Larix occidentalis</i>	<i>Prunus demissa</i>
<i>Libocedrus decurrens</i>	.. <i>marginata</i>
<i>Lonicera ciliosa</i>	.. <i>mollis</i>
.. <i>corymbialis</i>	.. <i>subcordata</i>
.. <i>edulis</i>	<i>Pseudotsuga mucronata</i>
.. <i>hispidula</i>	<i>Pyrus rivularis</i>
.. <i>involuta</i>	<i>Quercus chrysolepis</i>
<i>Menziesia rosea</i>	.. <i>garryana</i>
<i>Opulaster capitatus</i>	.. <i>kelloggii</i>
<i>Oenothera coccinea</i>	..
<i>Pachystima myrsinites</i>	<i>Rhamnus alnifolia</i>
<i>Philadelphus lewisii</i>	.. <i>purshiana</i>
<i>Philop douglasii</i>	.. <i>crocea</i>
	<i>Rhododendron albiflorum</i>
	<i>Rhododendron californicum</i>



<i>Rhus diversiloba</i>	<i>Rubus semper-virens</i>
.. <i>glabra</i>	<i>Rubus spectabilis</i>
.. <i>trilobata</i>	.. <i>vitifolius</i>
<i>Ribes ambiguum</i>	<i>Salix barclayi</i>
.. <i>atripes</i>	.. <i>discoloroides</i>
.. <i>ayreyanum</i>	.. <i>longifolia</i>
.. <i>bracteosum</i>	.. <i>nuttallii</i>
.. <i>canonicum</i>	.. <i>populifolia</i>
.. <i>cerinum</i>	.. <i>velutina</i>
.. <i>cerinum glabrum</i>	.. <i>parvifolia</i>
.. <i>erythrocarpum</i>	.. <i>discolorifolia</i>
.. <i>howellii</i>	
.. <i>lacustris</i>	
.. <i>laxiflorum</i>	
.. <i>leptanthum</i>	<i>Sambucus glauca</i>
.. <i>lobbii</i>	.. <i>pubens</i>
.. <i>menziesii</i>	<i>Sorbus occidentalis</i>
.. <i>sanguineum</i>	.. <i>sambucifolia</i>
.. <i>saxosum</i>	<i>Spiraea arbuscula</i>
.. <i>viscosissimum</i>	.. <i>douglasii</i>
<i>Rosa glauca</i>	.. <i>lucida</i>
.. <i>gymnocarpa</i>	.. <i>menziesii</i>
.. <i>macrocarpa</i>	<i>Symphoricarpos</i>
.. <i>microcarpa</i>	..
.. <i>pisocarpa</i>	<i>Taxus brevifolia</i>
.. <i>pisocarpoides</i>	<i>Tetradymia canescens</i>
.. <i>woodsii</i>	<i>Thuja plicata</i>
<i>Rubus lasiococcus</i>	<i>Tsuga heterophylla</i>
.. <i>leucodermis</i>	.. <i>mentensiana</i>
.. <i>nitidus</i>	
.. <i>parviflorus</i>	



*Umbellularia californica*

*Vaccinium altum*

.. *caespitosus*  
.. *caespitosum*

.. *glaucum*

.. *membranaceum*

.. *myrtillus*

.. *obatum*

.. *parifolium*

.. *scleratum*

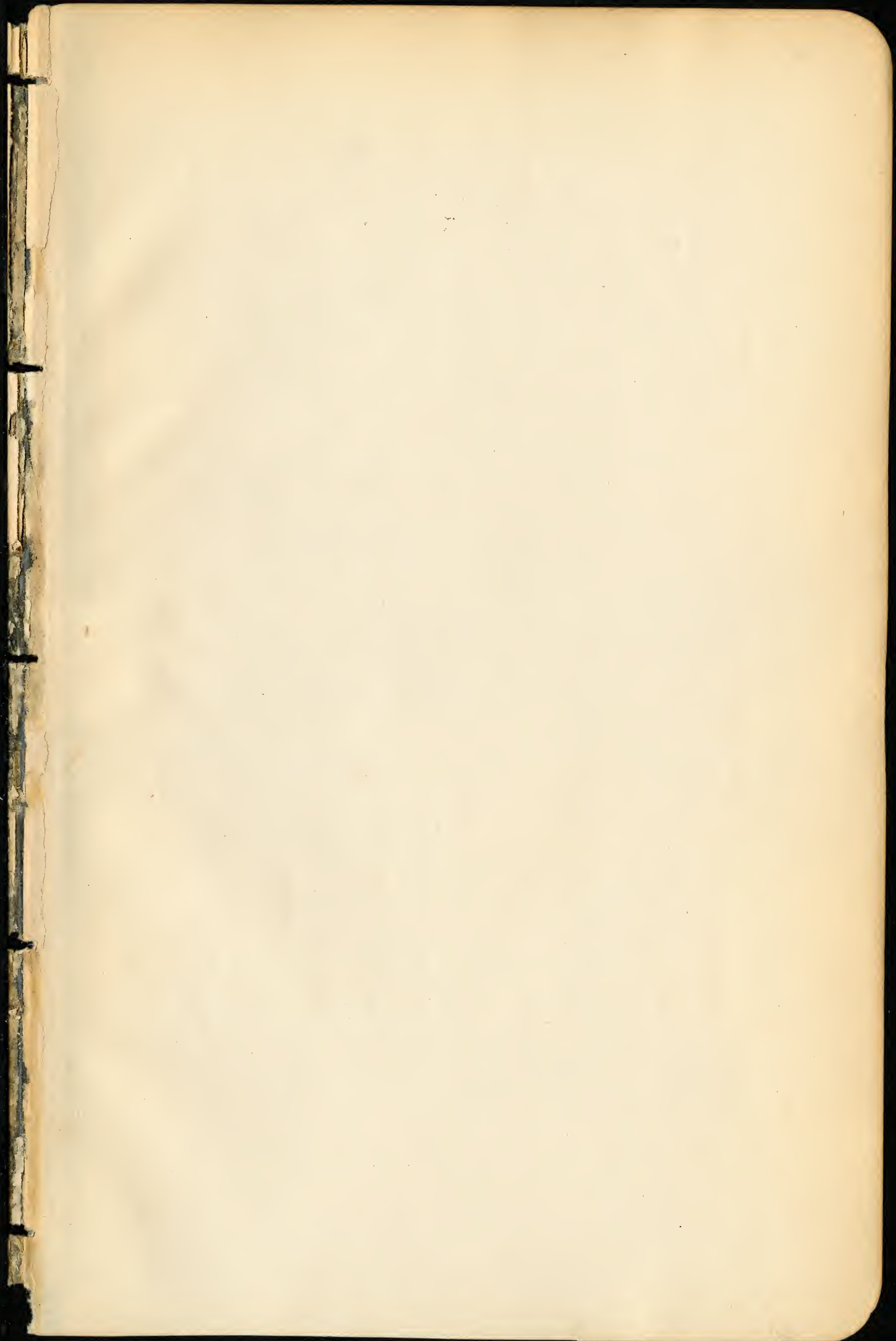
[*Vitis*

*Viburnum*

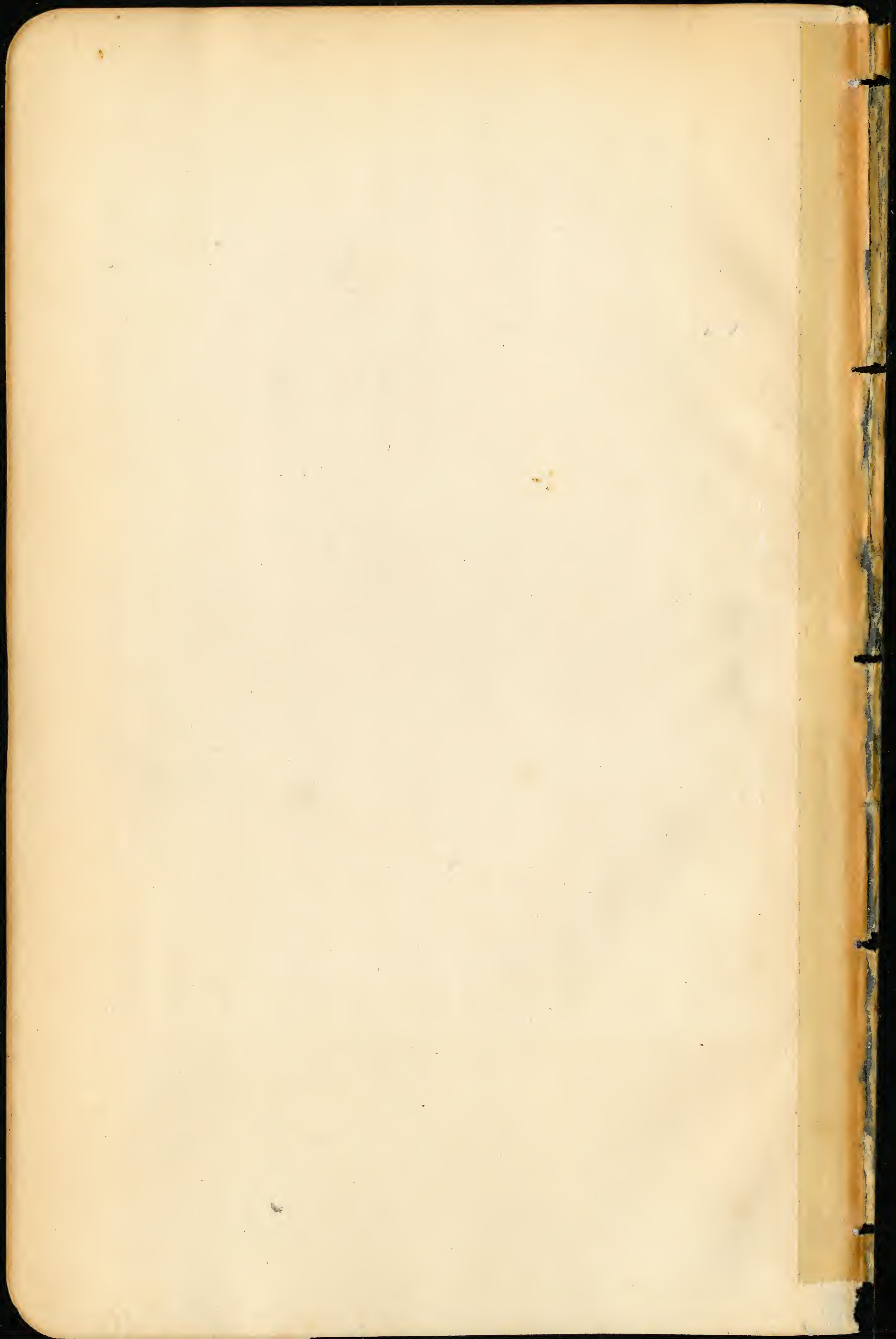


Mr. Washburn, Shelburn, postmaster,  
will direct me to the Miller brothers  
who are familiar with early fairs.











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